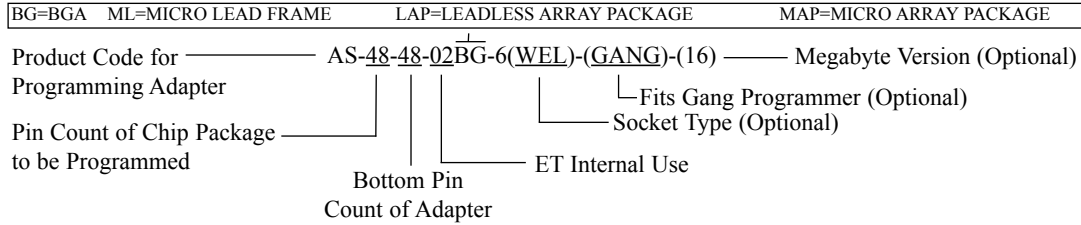


PROGRAMMING ADAPTERS - BGA/ MAP/LAP/TAP/MLF

Ordering Information Example



For a complete list of program adapter specifications, pricing and delivery information, see [Web Link:www.1800adapter.com/067](http://www.1800adapter.com/067)

BGA

| Pin Count | DIP Pin Count | Lead Pitch (mm) | Body Size (mm) | Grid Size | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|---------------|-----------------|----------------|-----------|-------------------------|----------------|----------------------------|-----------|
| 34 | 32 | 0.50 | 4X6 | 9X6 | SST39VF010/020/040 | 32-5BG9X6 | AS-34-32-01BG-6 | F7005 |
| 40 | 40 | 0.75 | 7.43x5.69 | 5X8 | GT28F008/016/S3/S5/SC | 40-4BG5X8 | AS-40-40-01BG-6YAM-8/16 | M4229 |
| 48 | 48 | 0.80 | 6X8 | 6x8 | INTEL | 48-6BG6X8 | AS-48-32-01BG-6 | F7006 |
| 48 | 48 | 0.75 | 9.25X7.13 | 6X8 | INTELTGT28F016B3) | 48-4BG6X8 | AS-48-40-01BG-6YAM-16 | F4334 |
| 48 | 48 | 0.75 | 7.48X5.74 | 6X8 | GT28F004/008B3 | 48-4BG6X8 | AS-48-40-01BG-6YAM-8 | M5699 |
| 48 | 48 | 0.75 | 7.9X6.5 | 6X8 | GT28F016C3/A16B3 | 48-4BG6X8 | AS-48-40-02BG-6TI-16 | M5902 |
| 48 | 48 | 0.75 | 9.8X7.6 | 6X8 | GT28F0323XA/C3XA | 48-4BG6X8 | AS-48-40-02BG-6TI-32 | M5523 |
| 48 | 48 | 0.75 | 9.8X7.6 | 6X8 | GT28F160B3 | 48-4BG6X8 | AS-48-44-01BG-6YAM-16 | M4226 |
| 48 | 48 | 0.75 | 7.9X6.5 | 6X8 | GT28F800B3/400B3 | 48-4BG6X8 | AS-48-44-01BG-6YAM-8 | M5497 |
| 48 | 48 | 0.75 | 7.286X10.85 | 6X8 | GT28F160CXA/B3XA | 48-4BG6X8 | AS-48-48-01BG-6TI-16 | M5448 |
| 48 | 48 | 0.75 | 7.3X10.85 | 6X8 | GT28F320C3XA/B3XA | 48-4BG6X8 | AS-48-48-01BG-6TI-32 | M5630 |
| 48 | 48 | 0.50 | 4X6 | 11X6 | 39XF800A/160A/320A/6401 | 48-5BG11X6 | AS-48-48-01BG-6 | F7007 |
| 48 | 48 | 0.80 | 8X9 | 6X8 | AMD 29LV160BB/BT | 48-6BG6X8 | AS-48-48-02BG-6WEL-GANG-16 | M5505 |
| 48 | 48 | 0.75 | 8X9 | 6X8 | FUJ 29DL163TD | 48-4BG6X8 | AS-48-48-03BG-6WEL-GANG-16 | M5893 |
| 48 | 48 | 0.80 | 6X8 | 6X8 | SST 39VF160 | 48-6BG6X8 | AS-48-48-04BG-6 | M6007 |
| 48 | 48 | 0.80 | 8X10 | 6X8 | SST 39VF100 | 48-6BG6X8 | AS-48-48-05BG-6 | M6256 |
| 48 | 48 | 0.80 | 8X9 | 6X8 | 29LV160BB/BT | 48-6BG6X8 | AS-48-48-06BG-6WEL-GANG-16 | F6526 |
| 48 | 48 | 0.80 | 6X8 | 6X8 | SST 39VF200A | 48-6BG6X8 | AS-48-48-07BG-6 | F7008 |
| 56 | 40 | 0.75 | 7.7X16.4 | 9x8 | INTEL G28F640J5 | 56-4BG9X8 | AS-56-40-01BG-6YAM-64 | M4637 |
| 56 | 48 | 0.75 | 7.7X16.4 | 9X8 | GT28F640J5 | 56-4BG9X8 | AS-56-48-01BG-6YAM-64 | M4638 |
| 56 | 48 | 0.75 | 8X10.24 | 6X10 | GT28F160F3/800F3 | 59-4BG6X10 | AS-56-48-02BG-6TI | M5442 |
| 56 | 48 | 0.80 | 8X10 | 8X8 | SST 34HF163X/64X | 56-6BG8X8 | AS-56-48-03BG-6 | F6270 |
| 63 | 48 | 0.80 | 8X14 | 8X12 | AMD 29LV033C/DL322C/3C | 63-6BG8X12 | AS-63-48-01BG-6WEL-GANG | M5631 |
| 64 | 48 | 1.00 | 10X13 | 8X8 | RC28F16(32,64)0C3XA(C) | 64-3BG008 | AS-64-48-01EBG-6TI | F5861 |
| 64 | 48 | 1.00 | 10X13 | 8X8 | RC28F320J3A | 64-3BG008 | AS-64-48-02EBG-6TI | M5862 |
| 64 | 48 | 1.00 | 10X13 | 8X8 | RC28F160F3 | 64-3BG008 | AS-64-48-03EBG-6TI | F2938 |

LAP/MLF

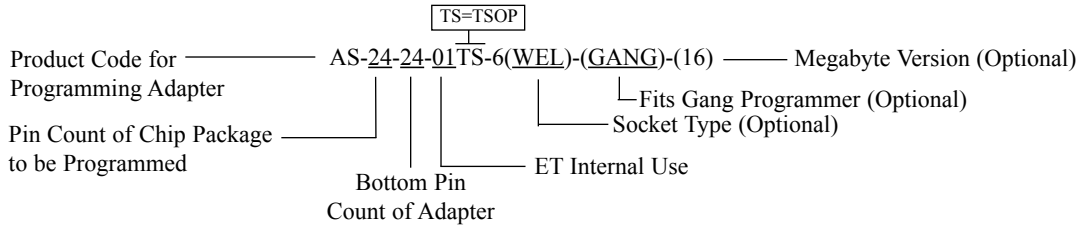
| Pin Count | DIP Pin Count | Lead Pitch (mm) | Body Size (mm) | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|---------------|-----------------|----------------|-------------------------|----------------|------------------|-----------|
| 8 | 8 | 1.27 | 5.10X8.10 | WIRED 1TO1 | 08-LAP1 | AS-08-08-01LAP-3 | M6488 |
| 8 | 8 | 1.27 | 5.84X4.93 | WIRED 1TO1 | 08-LAP2 | AS-08-08-02LAP-3 | F6696 |
| 8 | 8 | 1.27 | 5.99X5.99 | WIRED 1TO1 | 08-LAP2 | AS-08-08-03LAP-3 | F6827 |
| 8 | 8 | 1.27 | 8.00X6.00 | WIRED 1TO1 | 08-LAP2 | AS-08-08-03LAP-3 | F6978 |
| 8 | 8 | 1.27 | 5X6 | WIRED 1TO1 | 08-ML08 | AS-08-08-01ML-3 | M6611 |
| 8 | 20 | 1.27 | 6X8 | ATMEL AT45DB161B | 08-LAP4 | AS-08-20-01ML-3 | F6980 |
| 20 | 20 | 0.65 | 5X5 | WIRED 1TO1 | 20-ML02 | AS-20-20-01ML-6 | F6257 |
| 28 | 28 | 0.50 | 5.00X5.00 | WIRED 1TO1 | 28-ML03 | AS-28-28-01ML-6 | F6258 |
| 28 | 28 | 0.65 | 6.00X6.00 | PIC16F87XA | 28-ML38 | AS-28-28-02ML-6 | F6712 |
| 32 | 20 | 0.50 | 5X5 | AT TINY26 | 32-ML04 | AS-32-20-01ML-3 | F6772 |
| 32 | 28 | 0.50 | 5X5 | ATMEGA8, ATTINY28L/V | 32-ML04 | AS-32-28-01ML-3 | F6332 |
| 32 | 28 | 0.50 | 5X5 | ATTINY28 | 32-ML04 | AS-32-28-01ML-6 | F6356 |
| 32 | 40 | 0.50 | 5X5 | FOR AT90VC8544 | 32-ML04 | AS-32-40-01ML-6 | F6666 |
| 44 | 40 | 0.50 | 7X7 | ATMEL MEGA 16/32 & 8535 | 44-ML05 | AS-44-40-01ML-6 | F6842 |
| 44 | 40 | 0.50 | 7X7 | ATMEL MEGA 162 & 8515 | 44-ML05 | AS-44-40-02ML-6 | F6843 |
| 44 | 40 | 0.50 | 7X7 | 8031/51 PINOUT | 44-ML05 | AS-44-40-03ML-6 | F6774 |
| 44 | 40 | 0.50 | 7X7 | AT MEGA16/32/323/8535 | 44-ML05 | AS-44-40-04ML-6 | F6773 |

MAP/TAP

| Pin Count | DIP Pin Count | Lead Pitch (mm) | Body Size (mm) | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|---------------|-----------------|----------------|-------------------|----------------|------------------|-----------|
| 8 | 8 | 0.65 | 3X4.9 | WIRED 1TO1 | 08-MAP01 | AS-08-08-01MAP-3 | M6698 |
| 8 | 8 | 0.65 | 8.4X3.65 | WIRED 1TO1 | 08-LAP2 | AS-08-08-01TAP-3 | F7047 |

TSOP - PROGRAMMING ADAPTERS

Ordering Information Example



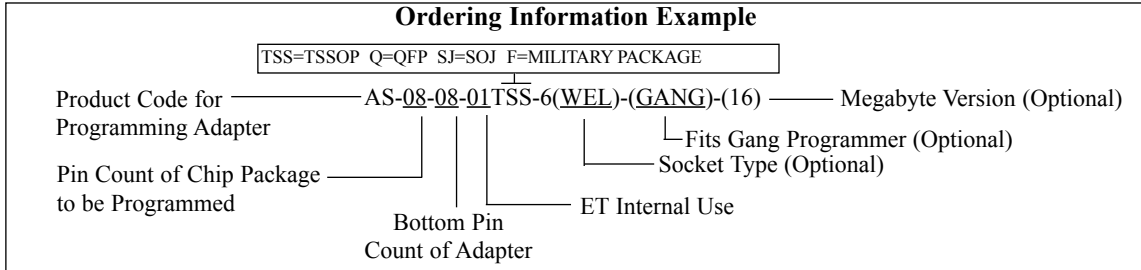
For a complete list of program adapter specifications, pricing and delivery information, see **Web Link: www.1800adapter.com/067**

TSOP

| Pin Count | DIP Pin Count | Lead Pitch (mm) | Body Width (mm) | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|---------------|-----------------|-----------------|-------------------------------|----------------|---------------------------|-----------|
| 24 | 24 | 0.65 | 4.4X7.8 | Wired 1 TO 1 | 024-ST03 | AS-24-24-01TSS-6-GANG | M6023 |
| 28 | 28 | 0.55 | 11.8 | Wired 1 TO 1 | 028-TS05 | AS-28-28-01TS-6YAM-GANG-S | M1133 |
| 32 | 24 | 0.50 | 18.4 | PIC28C16A | 032-TS01 | AS-32-24-01TS-6YAM-GANG-S | M4024 |
| 32 | 28 | 0.50 | 18.4 | 27C256 | 032-TS01 | AS-32-28-01TS-6YAM-GANG-S | M2281 |
| 32 | 28 | 0.50 | 18.4 | 27C64/256/512 | 032-TS01 | AS-32-28-02TS-6ENP-GANG-S | F1777 |
| 32 | 28 | 0.50 | 12.4 | X28(H)C64 | 032-TS04 | AS-32-28-04TS-6ENP-GANG-S | M2152 |
| 32 | 28 | 0.50 | 18.4 | X28(H)C64 | 032-TS01 | AS-32-28-05TS-6YAM-GANG-S | M3841 |
| 32 | 32 | 0.50 | 18.4 | F28F010 | 032-TS01 | AS-32-32-01TS-6ENP-GANG-R | M1705 |
| 32 | 32 | 0.50 | 18.4 | AT49BV020 | 032-TS01 | AS-32-32-01TS-6ENP-GANG-S | M1856 |
| 32 | 32 | 0.50 | 18.4 | OPEN TOP | 032-TS01 | AS-32-32-01TS-6YAM-GANG-R | M1794 |
| 32 | 32 | 0.50 | 18.4 | OPEN TOP | 032-TS01 | AS-32-32-01TS-6YAM-GANG-S | M2119 |
| 32 | 32 | 0.50 | 12.4 | HIT29C101T15 | 032-TS04 | AS-32-32-03TS-6ENP-GANG-S | M2115 |
| 32 | 32 | 0.50 | 18.4 | CLAMSHL | 032-TS01 | AS-32-32-04TS-6YAM-GANG-S | M4224 |
| 32 | 32 | 0.50 | 18.4 | F28F020 | 032-TS01 | AS-32-32-05TS-6ENP-GANG-S | M5056 |
| 32 | 32 | 0.50 | 18.4 | N/A | 032-TS01 | AS-32-32-06TS-6WEL-GANG-S | F7011 |
| 40 | 32 | 0.50 | 18.4 | AT27LV040/27C040 | 040-TS01 | AS-40-32-01TS-6YAM-S | M1876 |
| 40 | 32 | 0.50 | 12.4 | MTSU27C201VP | 040-TS04 | AS-40-32-02TS-6YAM-R | M4302 |
| 40 | 32 | 0.50 | 12.4 | MTSU27C201VP | 040-TS04 | AS-40-32-02TS-6YAM-S | M1366 |
| 40 | 32 | 0.50 | 18.4 | NEC27C4001GZ | 040-TS01 | AS-40-32-03TS-6YAM-S | M1367 |
| 40 | 40 | 0.50 | 18.4 | 28F008/16SA/SAL/SC | 040-TS01 | AS-40-40-01TS-6YAM-GANG-R | F1208 |
| 40 | 40 | 0.50 | 18.4 | 28F008/16SA/SAL/SC | 040-TS01 | AS-40-40-01TS-6YAM-GANG-S | M1209 |
| 40 | 40 | 0.50 | 18.4 | E28F002/4/8/BX/BL/BV | 040-TS01 | AS-40-40-02TS-6YAM-GANG-S | M1308 |
| 40 | 40 | 0.50 | 12.4 | M5M28F102/27202RV | 040-TS04 | AS-40-40-03TS-6YAM-GANG-R | M2000 |
| 40 | 40 | 0.50 | 12.4 | M5M28F102P | 040-TS04 | AS-40-40-03TS-6YAM-GANG-S | M3831 |
| 40 | 40 | 0.50 | 18.4 | AT27LV4096 | 040-TS01 | AS-40-40-04TS-6YAM-GANG-S | M3964 |
| 44 | 44 | 0.80 | 10.16 | Wired 1 TO 1 | 044-TS12 | AS-44-44-01TS2-6ENP-S | M5841 |
| 48 | 40 | 0.50 | 18.4 | E28F200/400CR/CV | 048-TS01 | AS-48-40-01TS-6WEL-S | M3269 |
| 48 | 40 | 0.50 | 18.4 | E28F200/400CR/CV | 048-TS01 | AS-48-40-01TS-6WEL-S | F5902 |
| 48 | 40 | 0.50 | 18.4 | E28F200/400/800CR/CV | 048-TS01 | AS-48-40-02TS-6WEL-S | M3270 |
| 48 | 40 | 0.50 | 18.4 | MBM29F080/016 | 048-TS01 | AS-48-40-03TS-6WEL-S | M4633 |
| 48 | 42 | 0.50 | 16.4 | MBM29F080/016 | 048-TS02 | AS-48-42-01TS-6YAM-S | M2147 |
| 48 | 42 | 0.50 | 18.4 | AMD/FUJ29F016 | 048-TS01 | AS-48-42-02TS-6WEL-S | M3884 |
| 48 | 44 | 0.50 | 18.4 | E28F200/400/800CV/E/B5 | 048-TS01 | AS-48-44-01TS-6WEL-S | M3272 |
| 48 | 44 | 0.50 | 18.4 | AMD29LV800B | 048-TS01 | AS-48-44-01TS-6WEL-R | M5340 |
| 48 | 44 | 0.50 | 18.4 | AMD/FUJ 29F400AB/T | 048-TS01 | AS-48-44-02TS-6WEL-S | M3897 |
| 48 | 44 | 0.50 | 18.4 | AMD/FUJ 29LV400 | 048-TS01 | AS-48-44-03TS-6WEL-S | M3913 |
| 48 | 44 | 0.50 | 18.4 | MBM29F200/400/800 | 048-TS01 | AS-48-44-04TS-6WEL-S | M4303 |
| 48 | 44 | 0.50 | 18.4 | TE28F160/400/800B3 | 048-TS01 | AS-48-44-05TS-6YAM-S | M4227 |
| 48 | 44 | 0.50 | 18.4 | DATA I/O SPRINT ONLY | 048-TS01 | AS-48-44-06TS-6YAM-S | M6087 |
| 48 | 48 | 0.50 | 18.4 | AMD 29F400 | 048-TS01 | AS-48-48-01TS-6WEL-S | M3813 |
| 48 | 48 | 0.50 | 18.4 | AMD29F016 (12,37)(35,36) | 048-TS01 | AS-48-48-02TS-6WEL-S | M3895 |
| 48 | 48 | 0.50 | 18.4 | 29X/F100/200/400T/B/CX/EC/FC | 048-TS01 | AS-48-48-03TS-6YAM-S | M3955 |
| 48 | 48 | 0.50 | 18.4 | TE28F320/160/800C3XA/B3XA | 048-TS01 | AS-48-48-04TS-6YAM-S | M5091 |
| 48 | 48 | 0.50 | 18.4 | Wired 1 TO 1 | 048-TS01 | AS-48-48-05TS-6WEL-S | M5504 |
| 48 | 48 | 0.50 | 18.4 | Wired 1 TO 1 | 048-TS01 | AS-48-48-05TS-6WEL-S-MS | F7009 |
| 48 | 48 | 0.50 | 18.4 | CHIPMASTER AM29F400 | 048-TS01 | AS-48-48-06TS-6WEL-S | M6295 |
| 56 | 40 | 0.50 | 18.4 | E28F200/400BV/BX/BL | 056-TS01 | AS-56-40-01TS-6YAM-GANG-S | M1785 |
| 56 | 40 | 0.50 | 18.4 | E28F200/400BX/BL/BV | 056-TS01 | AS-56-40-02TS-6YAM-GANG-S | M1784 |
| 56 | 40 | 0.50 | 18.4 | E28F016XS/320J5/160S3 | 056-TS01 | AS-56-40-04TS-6YAM-S | M3276 |
| 56 | 40 | 0.50 | 18.4 | E28F016XD | 056-TS01 | AS-56-40-04TS-6YAM-S | M3277 |
| 56 | 44 | 0.50 | 18.4 | E28F200/400BX/BV/BL | 056-TS01 | AS-56-44-01TS-6YAM-GANG-S | M1709 |
| 56 | 44 | 0.50 | 18.4 | E28F016SA/SV | 056-TS01 | AS-56-44-02TS-6YAM-GANG-S | M2043 |
| 56 | 44 | 0.50 | 18.4 | E28F016/SV | 056-TS01 | AS-56-44-03TS-6YAM-GANG-S | M2158 |
| 56 | 48 | 0.50 | 18.4 | E28F016SA/SV,DD28F032SA | 056-TS01 | AS-56-48-01TS-6YAM-S | M2160 |
| 56 | 48 | 0.50 | 18.4 | E28F016XS/320J5,TE28F160S3/S5 | 056-TS01 | AS-56-48-02TS-6YAM-S | M3278 |
| 56 | 48 | 0.50 | 18.4 | TE28F160/800F3 | 056-TS01 | AS-56-48-03TS-6YAM-S | M5515 |
| 56 | 56 | 0.50 | 18.4 | Wired 1 TO 1 | 056-TS01 | AS-56-56-01TS-6YAM | F7010 |

PROGRAMMING ADAPTERS - TSSOP/SOJ/FLATPACK/PQFP/TQFP

Ordering Information Example



For a complete list of program adapter specifications, pricing and delivery information, see **Web Link:www.1800adapter.com/067**

TSSOP

| Pin Count | DIP Pin Count | Lead Pitch (mm) | Body Width (mm) | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|---------------|-----------------|-----------------|---------------------------|----------------|---------------------------|-----------|
| 8 | 8 | 0.65 | 4.40 | WIRED 1-1 | 08-ST03 | AS-08-08-01ST-3 | M4607 |
| 8 | 8 | 0.65 | 4.40 | MICROCHIP 24AA64/LC64/C64 | 08-ST03 | AS-08-08-02ST-3 | M5300 |
| 8 | 8 | 0.65 | 4.40 | MICROCHIP HCS362 | 08-ST03 | AS-08-08-03ST-3 | M5503 |
| 8 | 8 | 0.65 | 3.00 | MICROCHIP 24AA52 | 08-ST36 | AS-08-08-04ST-3 | M6969 |
| 20 | 20 | 0.65 | 4.40 | WIRED 1-1 | 20-ST03 | AS-20-20-01TSS-6YAM | M4619 |
| 20 | 20 | 0.65 | 4.40 | 27LV520 | 20-ST03 | AS-20-20-02TSS-6YAM | M5382 |
| 28 | 28 | 0.65 | 4.40 | Philips | 28-ST03 | AS-28-28-01TSS-6ENP-GANG | F6511 |
| 56 | 40 | 0.50 | 18.4 | DD28F032/16SA/SV | TS01 | AS-56-40-03TS-6YAM-GANG-S | M2087 |

SOJ

| Pin Count | DIP Pin Count | Lead Pitch (mm) | Body Width (mm) | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|---------------|-----------------|-----------------|-------------------|----------------|-----------------|-----------|
| 20 | 20 | 1.27 | .300" | WIRED 1TO1 | 20-SJ01 | AS-20-20-01SJ-3 | M3089 |
| 20 | 20 | 1.27 | .300" | WIRED 1TO1 | 20-SJ01 | AS-20-20-01SJ-6 | M1476 |
| 24 | 24 | 1.27 | .300" | WIRED 1TO1 | 24-SJ01 | AS-24-24-01SJ-6 | M3094 |
| 26 | 26 | 1.27 | .300" | WIRED 1TO1 | 26-SJ01 | AS-26-26-01SJ-3 | M3103 |
| 26 | 26 | 1.27 | .300" | WIRED 1TO1 | 26-SJ01 | AS-26-26-01SJ-6 | M2208 |
| 28 | 28 | 1.27 | .300" | WIRED 1TO1 | 28-SJ01 | AS-28-28-01SJ-3 | M3180 |
| 28 | 28 | 1.27 | .300" | WIRED 1TO1 | 28-SJ01 | AS-28-28-01SJ-6 | M2199 |
| 28 | 28 | 1.27 | .300" | WIRED 1TO1 | 28-SJ01 | AS-28-28-03SJ-3 | M2240 |

MILITARY STANDARD FLATPACK

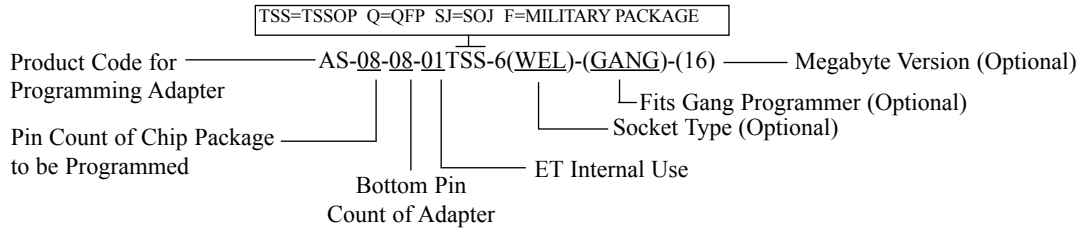
| Pin Count | DIP Pin Count | Lead Pitch (mm) | Body Dimensions Inches | Carrier Dimensions Inches | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|---------------|-----------------|------------------------|---------------------------|-------------------|----------------|----------------|-----------|
| 16 | 16 | 0.50 | .280"X.420" | 3/4 X 1 | Wired 1TO1 | 16-FL01 | AS-16-16-01F-3 | M3067 |
| 16 | 16 | 0.50 | .280"X.420" | 3/4 X 1 | Wired 1TO1 | 16-FL01 | AS-16-16-01F-6 | M3068 |
| 20 | 20 | 0.50 | .300"X.520" | 3/4 X 1 | Wired 1TO1 | 20-FL02 | AS-20-20-01F-3 | M3085 |
| 24 | 24 | 0.50 | .400"X.620" | 1 1/4 X 1 1/4 | Wired 1TO1 | 24-FL04 | AS-24-24-02F-3 | M3095 |
| 24 | 24 | 0.50 | .400"X.620" | 1 1/4 X 1 1/4 | Wired 1TO1 | 24-FL04 | AS-24-24-02F-6 | M3096 |
| 28 | 28 | 0.50 | .380"X.740" | 1 1/4 X 1 1/4 | Wired 1TO1 | 28-FL03 | AS-28-28-01F-3 | M3176 |
| 28 | 28 | 0.50 | .380"X.740" | 1 1/4 X 1 1/4 | Wired 1TO1 | 28-FL03 | AS-28-28-01F-6 | M2116 |
| 32 | 32 | 1.27 | N/A | 1 1/4 X1 1/4 | Wired 1TO1 | 32-FL07 | AS-32-32-01F-6 | M2148 |

PQFP/TQFP

| Pin Count | DIP Pin Count | Lead Pitch (mm) | Body Width (mm) | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|---------------|-----------------|-----------------|--------------------------|----------------|-----------------------|-----------|
| 32 | 8 | 0.80 | 9.0 | EPC1441,1064/E | 32-QF59D | AS-032-08-01Q-3ENP | M5450 |
| 32 | 28 | 0.80 | 9.0 | AT90S/LS2333/4433/MG8 | 32-QF59D | AS-032-28-01Q-3ENP | M5801 |
| 32 | 28 | 0.80 | 9.0 | AT90S/LS2333/443 | 32-QF59D | AS-032-28-01Q-3ENP-MS | M5801 |
| 44 | 28 | 0.80 | 12.0 | IPLSI 1016/E,2032 | 44-QF16D | AS-44-28-01Q-3 | M4815 |
| 44 | 28 | 0.80 | 12.0 | IPLSI 1016/E,2032 | 44-QF16D | AS-44-28-01Q-6 | M2197 |
| 44 | 28 | 0.80 | 12.0 | MACH111/210/211/215 | 44-QF16D | AS-044-28-01Q-6ENP-SP | M4168 |
| 44 | 28 | 0.80 | 12.0 | MACH110 ONLY!!! | 44-QF16D | AS-44-28-01Q-6ENP | M3878 |
| 44 | 28 | 0.80 | 12.0 | ISP1016/E,2032/V/LV,2064 | 44-QF16D | AS-44-28-02Q-6 | M4273 |
| 44 | 40 | 0.80 | 13.9/13.2 | 8031/51 | 44-QF16A/B | AS-044-40-01Q-6ENP | M2272 |
| 44 | 40 | 0.80 | 12.6 | 8031/51 | 44-QF16C | AS-44-40-01Q-6ENP-2.4 | M3915 |
| 44 | 40 | 0.80 | 12.0 | 8051 | 44-QF16D | AS-44-40-01Q-6ENP-2.0 | M6261 |

PQFP/TQFP - PROGRAMMING ADAPTERS

Ordering Information Example



For a complete list of program adapter specifications, pricing and delivery information, see **Web Link: www.1800adapter.com/067**

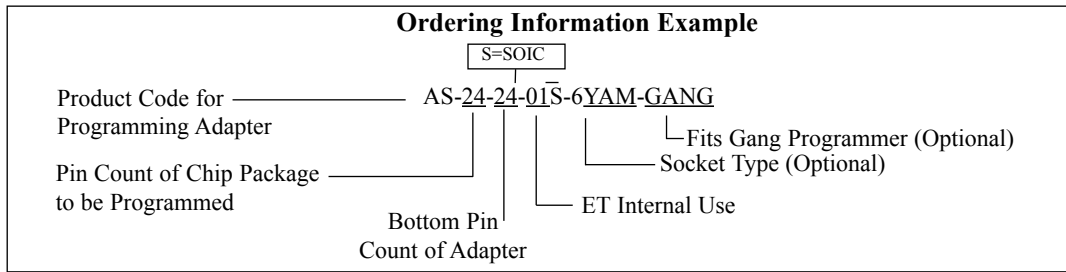
PQFP/TQFP (cont.)

| Pin Count | Pin Count of Adapter | Lead Pitch (mm) | Body Width (mm) | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|----------------------|-----------------|-----------------|------------------------------|----------------|------------------------|-----------|
| 44 | 40 | 0.80 | 13.9 | 68HC705C8 | 44-QF16A | AS-44-40-02Q-6 | M2082 |
| 44 | 40 | 0.80 | 13.2 | 68HC705C8 | 44-QF16B | AS-44-40-02Q-6 | M2082 |
| 44 | 40 | 0.80 | 12.0 | 8051 | 44-QF16D | AS-44-40-02TQ-6ENP-2.0 | M6735 |
| 44 | 40 | 0.80 | 13.0 | PIC16C64/74 | 44-QF16B | AS-44-40-03Q-6YAM | M2157 |
| 44 | 40 | 0.80 | 12.0 | PIC16C64/74/661 | 44-QF16D | AS-044-40-03TQ-6YAM | M5074 |
| 44 | 40 | 0.80 | 13.0 | PIC17C42/43/44 | 44-QF16B | AS-044-40-04Q-6 | M3248 |
| 44 | 40 | 0.80 | 12.0 | 17C42(A),44,17CR42,43 | QF16D | AS-044-40-04TQ-6YAM | F5927 |
| 44 | 40 | 0.80 | 13.9/13.2 | EPM7032 | 44-QF16A/B | AS-044-40-05Q-6 | M3843 |
| 44 | 40 | 0.80 | 13.9/13.2 | PSD311 | 44-QF16A/B | AS-044-40-06Q-6YAM | M5330 |
| 44 | 40 | 0.80 | 12.6 | AT90(L)S4434,S8535,MEGA163L | 44-QF16C | AS-44-40-07Q-6ENP-2.4 | M5805 |
| 44 | 44 | 0.80 | 12.0 | CY7C371 | 44-QF16D | AS-044-44-01Q-6 | M4087 |
| 44 | 28 | 0.80 | 12.0 | ISPLSI 2032/LV | 44-QF16D | AS-048-28-01Q-6 | M4267 |
| 52 | 40 | 1.00 | 17.2 | PD301/02/03/11/12/13 | 52-QF37B | AS-052-40-01Q-6ENP | M1249 |
| 64 | 20 | 0.80 | 17.2 | UPD75P036GC | 64-QF29B | AS-064-20-01Q-6ENP | M3864 |
| 64 | 40 | 0.80 | 16.0 | 68HC705C9 | 64-QF29D | AS-064-40-02Q-6ENP | M4009 |
| 64 | 48 | 0.80 | 17.2 | 68HC711L6/E9 | 64-QF29B | AS-64-48-01Q-6ENP | M3825 |
| 64 | 48 | 0.80 | 17.2 | 68HC705/B16/B32/X16/BP32/X32 | 64-QF29B | AS-064-48-02Q-6ENP | M3826 |
| 64 | 48 | 1.00 | 23.2/17.2 | PD75108F/112F/116F | 64QF09B | AS-064-48-03Q-6 | M5842 |
| 80 | 28 | 0.80 | 23.9/17.9 | 4074639FS,404638/39FS | 80-QF08A | AS-080-28-01Q-6 | M4301 |
| 100 | 28 | 0.50 | 16.0 | IPLSI 1032/2096 | 100-QF49D | AS-100-28-01Q-6YAM | M1874 |
| 100 | 28 | 0.65 | 17.2/23.2 | MACH 231SP/445 | 100-QF06A | AS-100-28-03Q-6 | M2171 |
| 100 | 28 | 0.65 | 17.2/23.2 | MACH 231SP/445 | 100-QF06B | AS-100-28-03Q-6 | M2171 |
| 100 | 28 | 0.50 | 16.0 | ISP2064V,2128V | 100-QF49D | AS-100-28-04Q-6 | M4304 |
| 100 | 28 | 0.50 | 16.0 | ISPLSI 1024 | 100-QF49D | AS-100-28-05Q-6 | M5001 |
| 100 | 28 | 0.50 | 16.0 | PLSI/ISPLSI 1032/2064/E | 100-QF49D | AS-100-28-06Q-6 | M5048 |
| 100 | 32 | 0.50 | 16.0 | HD647343F16 | 100-QF49D | AS-100-32-01Q-6YAM | M4094 |
| 120 | 28 | 0.80 | 31.2 | IPLSI 1048 | 120-QF05B | AS-120-28-01Q-6YAM | M2173 |
| 128 | 28 | 0.80 | 31.2 | IPLSI 1048/E,2096 | 128-QF13B | AS-128-28-01Q-6YAM | M2081 |
| 128 | 28 | 0.80 | 31.2 | ISPLSI 2096V | 128-QF13B | AS-128-28-02Q-6 | M4274 |
| 128 | 28 | 0.40 | 16.0 | ISPLSI1048C/E,2096 | 128-QF27 | AS-128-28-03Q-6YAM | M4367 |
| 132 | 28 | 0.635 | 27.9 | IFX780,EPX780 | 132-QF03 | AS-132-28-01Q-6 | M1972 |
| 144 | 28 | 0.65 | 31.2 | MACH 355 | 144-QF10B | AS-144-28-01Q-6 | M3066 |
| 160 | 28 | 0.65 | 31.2 | IPLSI2128/3256 | 160-QF07B | AS-160-28-01Q-6 | M1453 |
| 160 | 28 | 0.65 | 31.2 | IPLSI 3256 | 160-QF07B | AS-160-28-02Q-6 | M4610 |
| 160 | 28 | 0.65 | 31.2 | ISPLSI/PLSI 2128V | 160-QF07B | AS-160-28-03Q-6 | M4611 |
| 160 | 48 | 0.65 | 31.2 | CY7C375 | 160-QF07B | AS-160-48-01Q-6ENP | M3865 |
| 176 | 28 | 0.50 | 26.0 | IPLSI 2128 | 176-QF67D | AS-176-28-01Q-6ENP | M3327 |
| 176 | 28 | 0.50 | 26.0 | ISPLSI 2128V | 176-QF67D | AS-176-28-02Q-6 | M4266 |
| 176 | 28 | 0.50 | 26.0 | ISPGDX120 | 176-QF67D | AS-176-28-03Q-6 | M5050 |
| 176 | 48 | 0.50 | 26.0 | CY7C375 | 176-QF67D | AS-176-48-01Q-6ENP | M4032 |
| 208 | 28 | 0.50 | 30.6 | MACH 465 | 208-QF21C | AS-208-28-02Q-6 | F2218 |
| 208 | 28 | 0.50 | 31.2 | ISPLSI3160,ISPGDS160 | 208-QF21B | AS-208-28-04MQ-6ENP | M4270 |
| 208 | 28 | 0.50 | 30.6 | AMD MACH 256 | 208-QF21C | AS-208-28-04Q-6YAM | M4621 |
| 208 | 28 | 0.50 | 30.6 | ISPLSI 2096V | 208-QF21C | AS-208-28-05Q-6 | M4622 |
| 240 | 28 | 0.50 | 34.6 | ISPLSI 2096V | 240-QF62C | AS-240-28-01Q-6ENP | M4487 |
| 304 | 28 | 0.50 | 42.6 | ISPLSI 3256E | 304-QF61C | AS-304-28-01Q-6YAM | M4265 |

PROGRAMMING ADAPTERS

Searching for a device specific adapter?
Use ET's Cross Reference Guides:
Weblink: www.emulation.com/catalog/cross

PROGRAMMING ADAPTERS - SOIC



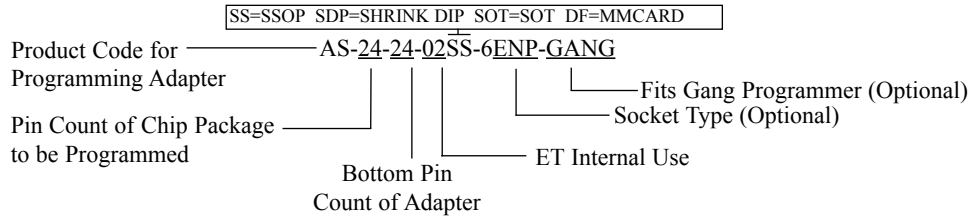
For a complete list of program adapter specifications, pricing and delivery information, see **Web Link: www.1800adapter.com/067**

SOIC

| Pin Count | Pin Count of Adapter | Lead Pitch mm | Body Width mm | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|----------------------|---------------|---------------|--------------------------------|----------------|-----------------------------|-----------|
| 8 | 8 | 1.27 | 3.9 | WIRED 1 TO 1 | 08-SO01 | AS-08-08-01S-3 | M1229 |
| 8 | 8 | 1.27 | 5.28 | WIRED 1TO1 | 08-SO02 | AS-08-08-03S-3YAM | M4272 |
| 8 | 8 | 1.27 | 5.28 | 93LC46/56/66B | 08-SS02 | AS-08-08-02S-3 | M4460 |
| 14 | 8 | 1.27 | 3.9 | MCHIP 93LC46/56/66B | 14-SO01 | AS-14-08-R1S-3 | M4089 |
| 16 | 16 | 1.27 | 7.62 | WIRED 1TO1 | 16-SO03 | AS-16-16-02S-3 | M2045 |
| 16 | 16 | 1.27 | 7.62 | WIRED 1TO1 | 16-SO03 | AS-16-16-02S-6 | M2140 |
| 16 | 16 | 1.27 | 3.9 | MS-CY3079 | 16-SO01 | AS-16-16-04S-3-MS-CY3079 | M5247 |
| 16 | 16 | 1.27 | 3.9 | MS-CY3079-OT | 16-SS01 | AS-16-16-04S-3-MS-CY3079-OT | M2704 |
| 16 | 16 | 1.27 | 3.9 | WIRED 1TO1 | 16-SO01 | AS-16-16-R1S-3 | M1803 |
| 16 | 16 | 1.27 | 3.9 | WIRED 1TO1 | 16-SO01 | AS-16-16-R1S-6 | M2137 |
| 18 | 18 | 1.27 | 7.62 | WIRED 1TO1 | 18-SO03 | AS-18-18-01S-3-GANG | M1990 |
| 20 | 20 | 1.27 | 7.62 | WIRED 1TO1 | 20-SO03 | AS-20-20-01S-3-GANG | M6264 |
| 20 | 20 | 1.27 | 7.62 | WIRED 1TO1 | 20-SO03 | AS-20-20-01S-6-GANG | M6263 |
| 20 | 20 | 1.27 | 5.6 | WIRED 1TO1 | 20-SO02 | AS-20-20-02S-3 | M1205 |
| 20 | 20 | 1.27 | 5.6 | WIRED 1TO1 | 20-SO02 | AS-20-20-02S-6 | M2145 |
| 24 | 24 | 1.27 | 8.55 | WIRED 1TO1 | 24-SO04 | AS-24-24-01S-3 | M3093 |
| 24 | 24 | 1.27 | 8.55 | WIRED 1TO1 | 24-SO04 | AS-24-24-01S-6-GANG | M2242 |
| 24 | 24 | 1.27 | 7.62 | WIRED 1TO1 | 24-SO03 | AS-24-24-02S-3-GANG | M5689 |
| 24 | 24 | 1.27 | 7.62 | WIRED 1TO1 | 24-SO03 | AS-24-24-02S-6-GANG | M1195 |
| 28 | 28 | 1.27 | 8.55 | WIRED 1TO1 | 28-SO04 | AS-28-28-01S-3-GANG | M3179 |
| 28 | 28 | 1.27 | 8.55 | WIRED 1TO1 | 28-SO04 | AS-28-28-01S-6-GANG | M1057 |
| 28 | 28 | 1.27 | 8.89 | WIRED 1TO1 | 28-SO05 | AS-28-28-02S-3 | M3181 |
| 28 | 28 | 1.27 | 8.89 | WIRED 1TO1 | 28-SO05 | AS-28-28-02S-6 | M2063 |
| 28 | 28 | 1.27 | 7.62 | WIRED 1TO1 | 28-SO03 | AS-28-28-03S-3-GANG | M2241 |
| 28 | 28 | 1.27 | 7.62 | WIRED 1TO1 | 28-SO03 | AS-28-28-03S-6-GANG | M2236 |
| 28 | 28 | 1.27 | 8.56 | WIRED 1TO1 | 28-SO04 | AS-28-28-04S-6-GANG | M4628 |
| 28 | 28 | 1.27 | 7.62 | 68HC705J2 | 28-SO03 | AS-28-28-06S-3-GANG | M4629 |
| 28 | 28 | 1.27 | 7.62 | 68HC705J2 | 28-SO03 | AS-28-28-06S-6-GANG | M4630 |
| 32 | 28 | 1.27 | 11.4 | WIRED 1TO1 | 32-SO10 | AS-32-32-01S-3 | M3225 |
| 32 | 32 | 1.27 | 11.4 | WIRED 1TO1 | 32-SO10 | AS-32-32-01S-6 | M1882 |
| 32 | 32 | 1.27 | 10.7 | WIRED 1TO1 | 32-SO08 | AS-32-32-02S-6-GANG | M1977 |
| 40 | 40 | 1.27 | 11.2 | WIRED 1TO1 | 40-SO06/10 | AS-40-40-01S-6YAM | M1991 |
| 40 | 40 | 1.27 | 11.2 | WIRED 1TO1 | 40-SO10 | AS-40-40-02S-6YAM | M2078 |
| 40 | 40 | 1.27 | 10.7 | 27C4000FEMALE | 40-SO08 | AS-40-40-03S-6YAM | M2103 |
| 40 | 40 | 1.27 | 11.2 | TC5XXX00FEMALE | 40-SO06/10 | AS-40-40-04S-6YAM | M1202 |
| 40 | 40 | 1.27 | 10.7 | WIRED 1TO1 | 40-SO08 | AS-40-40-05S-6YAM | M1068 |
| 40 | 40 | 0.50 | 18.4 | AT29C1024 | 40-TS01 | AS-40-40-05TS-6YAM-GANG-S | M4813 |
| 40 | 40 | 0.50 | 12.4 | 28C1024 | 40-TS04 | AS-40-40-06TS-6YAM-GANG-S | M4461 |
| 40 | 40 | 0.50 | 12.4 | AT49F1025 | 40-TS04 | AS-40-40-07TS-6YAM-GANG-S | M4271 |
| 40 | 40 | 0.50 | 18.4 | E28F004/008 | 40-TS01 | AS-40-40-08TS-6YAM-S | M5026 |
| 40 | 40 | 0.50 | 18.4 | FU28F/LV002/4/8/16/80ST | 40-TS01 | AS-40-40-09TS-6WEL-S | M5075 |
| 40 | 40 | 0.50 | 18.4 | WIRED 1TO1 | 40-TS01 | AS-40-40-10TS-6WEL-S | M5840 |
| 44 | 40 | 1.27 | 13.2 | PA28F200 | 44-SO09 | AS-44-40-01S-6YAM-GANG | M1247 |
| 44 | 40 | 1.27 | 13.2 | PA28F204 | 44-SO09 | AS-44-40-03S-6YAM-GANG | M1638 |
| 44 | 40 | 1.27 | 13.2 | PA28F200 | 44-SO09 | AS-44-40-04S-6YAM | M1783 |
| 44 | 40 | 1.27 | 13.2 | 28F002/200/400/800 | 44-SO09 | AS-44-40-05S-6YAM | M1782 |
| 44 | 40 | 1.27 | 13.2 | AMD | 44-SO09 | AS-44-40-06S-6YAM | M3863 |
| 44 | 40 | 1.27 | 13.18 | FUJI | 44-SO09 | AS-44-40-07S-6YAM | M4818 |
| 44 | 42 | 1.27 | 13.2 | WIRED 1TO1 | 44-SO09 | AS-44-42-01S-6YAM-GANG | M1935 |
| 44 | 42 | 1.27 | 13.18 | WIRED 1TO1 | 44-SO09 | AS-44-42-02S-6YAM | M2159 |
| 44 | 44 | 1.27 | 13.2 | 28F002/200/400/800, BV, BX, B5 | 44-SO09 | AS-44-44-01S-6YAM-GANG | M1414 |
| 44 | 44 | 1.27 | 13.2 | WIRED 1TO1 | 44-SO09 | AS-44-44-02S-6YAM | M3844 |
| 44 | 44 | 1.27 | 13.2 | AM29F200/400/800BX | 44-SO09 | AS-44-44-03S-6YAM | M4006 |

SSOP/SDIP/SOT/MMCARD - PROGRAMMING ADAPTERS

Ordering Information Example



For a complete list of program adapter specifications, pricing and delivery information, see **Web Link: www.1800adapter.com/067**

SSOP

| Pin Count | Pin Count of Adapter | Lead Pitch (mm) | Body Width (mm) | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|----------------------|-----------------|-----------------|---------------------|----------------|------------------------------|-----------|
| 8 | 8 | 0.65 | 3.00 | WIRED 1TO1 | 08-ST36 | AS-08-08-04ST-3 | F6969 |
| 16 | 16 | 0.65 | 5.30 | WIRED 1TO1 | 16-SS34 | AS-16-16-01SS-6ENP-GANG | M5778 |
| 16 | 16 | 0.65 | 5.30 | WIRED 1TO1 | 16-SS34 | AS-16-16-01SS-6ENP-GANG-LONG | F7013 |
| 20 | 18 | 0.65 | 5.30 | PIC16C54/20/61/22 | 20-SS34 | AS-20-18-01SS-3YAM | M1879 |
| 20 | 18 | 0.65 | 5.30 | PIC16C54/20/21/22 | 20-SS34 | AS-20-18-01SS-6YAM | M4616 |
| 20 | 18 | 0.65 | 4.40 | WIRED 1TO1 | 20-SS34 | AS-20-20-01SS-3 | M2109 |
| 20 | 20 | 0.65 | 5.30 | WIRED 1TO1 | 20-SS34 | AS-20-20-01SS-6 | M4618 |
| 20 | 20 | 0.635 | 300.80 | WIRED 1TO1 | 20-SS01 | AS-20-20-02SS-3 | M3664 |
| 20 | 20 | 0.635 | 300.80 | WIRED 1TO1 | 20-SS01 | AS-20-20-02SS-6 | M5445 |
| 20 | 20 | 0.65 | 4.40 | WIRED 1TO1 | 20-SS03 | AS-20-20-03SS-6 | M5445 |
| 24 | 24 | 0.65 | 4.40 | WIRED 1TO1 | 20-SS03 | AS-24-24-01SS-6-GANG | M5704 |
| 24 | 24 | 0.635 | 3.90 | CY3070,3071,3075 | 24-SS12 | AS-24-24-02SS-6WEL-S | M5105 |
| 28 | 28 | 0.65 | 5.30 | PIC16C55/57 | 28-SS34 | AS-28-28-01SS-6ENP-GANG | M3820 |
| 28 | 28 | 0.65 | 5.30 | WIRED 1TO1 | 28-SS34 | AS-28-28-02SS-6ENP-GANG | M3862 |
| 40 | 40 | 0.65 | 6.10 | WIRED 1TO1 | 40-SS05 | AS-40-40-01SS-6YAM | M5068 |
| 48 | 48 | 0.635 | 7.62 | WIRED 1TO1 | 48-SS06 | AS-48-48-01SS-6-GANG | M5493 |
| 56 | 4 | 0.80 | 13.3 | DA28F016SA/SV | 56-SS09 | AS-56-40-01SS-6TI | M3792 |
| 56 | 40 | 0.80 | 13.3 | DA28F016XS | 56-SS09 | AS-56-40-02SS-6TI | M4058 |
| 56 | 44 | 0.80 | 13.3 | DA28F016SA/SV | 56-SS09 | AS-56-44-01SS-6TI | M3793 |
| 56 | 44 | 0.80 | 13.3 | DA28F016SA/SV | 56-SS09 | AS-56-44-02SS-6TI | M3794 |
| 56 | 48 | 0.80 | 13.3 | DA28F016SA/SV | 56-SS09 | AS-56-48-01SS-6TI | M3807 |
| 56 | 48 | 0.80 | 13.3 | DA28F016SA/SV | 56-SS09 | AS-56-48-02SS-6TI | M4059 |
| 56 | 48 | 0.80 | 13.3 | 28F160F3 & 28F800F3 | 56-SS09 | AS-56-48-03SS-6TI | M5306 |
| 56 | 56 | 0.80 | 13.3 | WIRED 1TO1 | 56-SS09 | AS-56-56-01SS-6-YAM | M5307 |

SDIP

| Pin Count | Pin Count of Adapter | Lead Pitch (mm) | Body Width (mm) | Chip Manufacturer | ET Part# | Drawing # |
|-----------|----------------------|-----------------|-----------------|-------------------|-------------------|-----------|
| 56 | 48 | .070" | 16.51X47.79mm | MC68HC05B6 | AS-56-48-01SDIP-6 | M5519 |

SOT

| Pin Count | Pin Count of Adapter | Lead Pitch (mm) | Body Width (mm) | Chip Manufacturer | ET Part# | Drawing # |
|-----------|----------------------|-----------------|-----------------|--------------------------|--------------------|-----------|
| 6 | 6 | 0.95mm | 1.62 | WIRED 1TO1 | AS-06-06-01SOT23-3 | F6573 |
| 6 | 8 | 0.95mm | 1.62 | NC=4,5 | AS-06-08-01SOT23-6 | M5649 |
| 6 | 8 | 0.95mm | 1.62 | MICROCHIP 24AA01/24LC01B | AS-06-08-02SOT23-6 | F6996 |

MMCARD

| Pin Count | Pin Count of Adapter | Lead Pitch (mm) | Body Width (mm) | Chip Manufacturer | ET Part# | Drawing # |
|-----------|----------------------|-----------------|-----------------|-------------------|-----------------|-----------|
| 7 | 28 | 20.50 | 24X32 | ATMEL AT45DB161B | AS-07-28-01DF-6 | F6982 |

PROGRAMMING ADAPTERS - PGA, LGA, LCC, PLCC

Ordering Information Example

PG=PGA LG=LGA L=LCC P=PLCC

Product Code for AS-132-28-1PG(WEL)-(GANG)

Programming Adapter

Pin Count of Chip Package
to be Programmed

Bottom Pin
Count of Adapter

Fits Gang Programmer (Optional)
Socket Type (Optional)

ET Internal Use

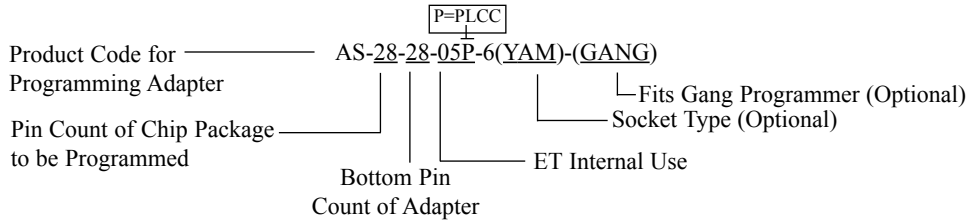
For a complete list of program adapter specifications, pricing and delivery information, see **Web Link:www.1800adapter.com/067**

PLCC

| Pin Count | Pin Count of Adapter | Lead Pitch mm | Body Width | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|----------------------|---------------|-------------|-----------------------------|----------------|---------------------------|-----------|
| 20 | 16 | 1.27 | .356" | N/C=1,6,11,16 | 20-PCC2 | AS-20-16-01P-3TEX | M1889 |
| 20 | 16 | 1.27 | .356" | N/C=1,6,11,16 | 20-PCC2 | AS-20-16-01P-6TEX | M1890 |
| 20 | 20 | 1.27 | .356" | WIRED 1TO1 | 20-PCC2 | AS-20-20-01P-3TEX | M1904 |
| 20 | 20 | 1.27 | .356" | WIRED 1TO1 | 20-PCC2 | AS-20-20-01P-3YAM | M1541 |
| 20 | 20 | 1.27 | .356" | WIRED 1TO1 | 20-PCC2 | AS-20-20-01P-6TEX | M1905 |
| 20 | 20 | 1.27 | .356" | WIRED 1TO1 | 20-PCC2 | AS-20-20-01P-6YAM | M1903 |
| 28 | 24 | 1.27 | .454" | N/C= 1,10,15,21 | 28-PCC6 | AS-28-24-02P-3TEX | M3128 |
| 28 | 24 | 1.27 | .454" | N/C=1,10,15,21 | 28-PCC6 | AS-28-24-02P-3YAM | M3129 |
| 28 | 24 | 1.27 | .454" | N/C=1,10,15,21 | 28-PCC6 | AS-28-24-02P-6TEX | M3130 |
| 28 | 24 | 1.27 | .454" | N/C=1,10,15,21 | 28-PCC6 | AS-28-24-02P-6YAM | M1567 |
| 28 | 24 | 1.27 | .454" | N/C=5,8,11,19,NL PKG | 28-PCC6 | AS-28-24-04P-6YAM | M3140 |
| 28 | 24 | 1.27 | .454" | N/C=1,8,15,22 FN PKG | 28-PCC6 | AS-28-24-05P-3YAM | M1543 |
| 28 | 24 | 1.27 | .454" | N/C=1,8,15,22 FN PKG | 28-PCC6 | AS-28-24-05P-6YAM | M3144 |
| 28 | 24 | 1.27 | .454" | N/C=5,11,19,25 | 28-PCC6 | AS-28-24-06P-6TEX | M3148 |
| 28 | 24 | 1.27 | .454" | NC=11,19(14,15)(1,28) | 28-PCC6 | AS-28-24-07P-6YAM | M3154 |
| 28 | 24 | 1.27 | .454" | N/C=1,11,15,19 | 28-PCC6 | AS-28-24-09P-6YAM | M3166 |
| 28 | 24 | 1.27 | .454" | N/C=5,10,21,22 | 28-PCC6 | AS-28-24-13P-3YAM | M3172 |
| 28 | 24 | 1.27 | .454" | N/C=5,10,21,22 | 28-PCC6 | AS-28-24-13P-6YAM | M3173 |
| 28 | 28 | 1.27 | .454" | WIRED 1TO1 | 28-PCC6 | AS-28-28-01P-3TEX | M2016 |
| 28 | 28 | 1.27 | .454" | WIRED 1TO1 | 28-PCC6 | AS-28-28-01P-3YAM | M2015 |
| 28 | 28 | 1.27 | .454" | WIRED 1TO1 | 28-PCC6 | AS-28-28-01P-6TEX | M2017 |
| 28 | 28 | 1.27 | .454" | WIRED 1TO1 | 28-PCC6 | AS-28-28-01P-6YAM | M1184 |
| 28 | 28 | 1.27 | .454" | 90 DEGREE ROTATION | 28-PCC6 | AS-28-28-05P-6YAM | M1015 |
| 32 | 24 | 1.27 | .450"X.550" | NC=1,2,3,12,17,26,27,30 | 32-PCC7 | AS-32-24-05P-3YAM | M2274 |
| 32 | 24 | 1.27 | .450"X.550" | NC=1,2,3,12,17,26,27,30 | 32-PCC7 | AS-32-24-05P-6YAM | M3203 |
| 32 | 28 | 1.27 | .450"X.550" | N/C=1,12,17,26 | 32-PCC7 | AS-32-28-01P-3YAM-LN | M3208 |
| 32 | 28 | 1.27 | .450"X.550" | N/C=1,12,17,26 | 32-PCC7 | AS-32-28-01P-6YAM-GANG-LN | M1384 |
| 32 | 28 | 1.27 | .450"X.550" | N/C=1,12,17,26 | 32-PCC7 | AS-32-28-01P-6YAM-LN | M1244 |
| 32 | 28 | 1.27 | .450"X.550" | N/C=11,15,18,23 | 32-PCC7 | AS-32-28-02P-6TEX | M3213 |
| 32 | 32 | 1.27 | .450"X.550" | WIRED 1TO1 | 32-PCC7 | AS-32-32-01P-3YAM-LN | M3088 |
| 32 | 32 | 1.27 | .450"X.550" | WIRED 1TO1 | 32-PCC7 | AS-32-32-01P-6YAM-GANG-LN | M1269 |
| 32 | 32 | 1.27 | .450"X.550" | WIRED 1TO1 | 32-PCC7 | AS-32-32-01P-6YAM-LN | M1677 |
| 44 | 28 | 1.27 | .654" | MACH110/111/210/215 | 44-PCC3 | AS-44-28-01P-3YAM | M1111 |
| 44 | 28 | 1.27 | .654" | MACH110/111/210/215 | 44-PCC3 | AS-44-28-01P-6YAM | M1831 |
| 44 | 28 | 1.27 | .654" | IPLSI 1016/2032 | 44-PCC3 | AS-44-28-03P-6YAM | M2093 |
| 44 | 40 | 1.27 | .654" | NC=17,39(22,23)(1,44) | 44-PCC3 | AS-44-40-03P-6YAM | M1742 |
| 44 | 40 | 1.27 | .654" | N/C=1,17,22,39 | 44-PCC3 | AS-44-40-04P-6YAM | M3247 |
| 44 | 40 | 1.27 | .654" | N/C=1,12,23,34 (8051) | 44-PCC3 | AS-44-40-07P-6TEX | M2151 |
| 44 | 40 | 1.27 | .654" | NC=1,12,23,34(8051) | 44-PCC3 | AS-44-40-07P-6YAM-GANG | M1988 |
| 44 | 40 | 1.27 | .654" | N/C=1,12,23,34 (8051) | 44-PCC3 | AS-44-40-07P-6YAM | M3255 |
| 44 | 40 | 1.27 | .654" | N/C=1,13,23,33 | 44-PCC3 | AS-44-40-08P-6YAM | M1312 |
| 44 | 40 | 1.27 | .654" | NC=40,41,42(1,12,23,34) | 44-PCC3 | AS-44-40-09P-6YAM | F4343 |
| 44 | 40 | 1.27 | .654" | ATV2500 | 44-PCC3 | AS-44-40-13P-6YAM-LN | M1260 |
| 44 | 40 | 1.27 | .654" | PSD301/2/11/12/13 | 44-PCC3 | AS-44-40-14P-6YAMIC120 | M3266 |
| 44 | 40 | 1.27 | .654" | PSD301/2/3/11/12/13 | 44-PCC3 | AS-44-40-14P-6YAMIC51 | M1801 |
| 44 | 40 | 1.27 | .654" | PSD301/2/3/11/12/13 | BPPROG ONLY | AS-44-40-15P-6YAM | M3267 |
| 44 | 40 | 1.27 | .654" | PIC16C54/64/74/77/F87 | 44-PCC3 | AS-44-40-17P-6YAM | M2150 |
| 44 | 40 | 1.27 | .654" | CY7C259 | 44-PCC3 | AS-44-40-18P-6YAM | M1117 |
| 44 | 40 | 1.27 | .654" | CY7C270 | 44-PCC3 | AS-44-40-19P-6YAM | M1160 |
| 44 | 40 | 1.27 | .654" | 68HC711D3 | 44-PCC3 | AS-44-40-20P-6YAM | M3821 |
| 44 | 40 | 1.27 | .654" | 68HC705C4/C8 | 44-PCC3 | AS-44-40-21P-6YAM | M3822 |
| 44 | 40 | 1.27 | .654" | 68HC705C9/D9 | 44-PCC3 | AS-44-40-22P-6YAM | M3279 |
| 44 | 40 | 1.27 | .654" | PIC17C42 | 44-PCC3 | AS-44-40-28P-6YAM | M3979 |
| 44 | 40 | 1.27 | .654" | AT90(L)S4434,S8535,MEGA163L | 44-PCC3 | AS-44-40-29P-6YAM-GANG | M5804 |
| 44 | 44 | 1.27 | .654" | WIRED 1TO1 | 44-PCC3 | AS-44-44-01P-6YAM | M3988 |
| 44 | 40 | 1.27 | .654" | N/C=6,7,28,39 | 44-PCC3 | AS-44-40-01P-6TEX | M3238 |
| 44 | 40 | 1.27 | .654" | NC=17,39(22,23)(1,44) | 44-PCC3 | AS-44-40-03P-6TEX | M3243 |
| 44 | 44 | 1.27 | .654" | CY7C371 | 44-PCC3 | AS-44-44-03P-6YAM | M3845 |

PLCC - PROGRAMMING ADAPTERS

Ordering Information Example



For a complete list of program adapter specifications, pricing and delivery information, see [Web Link:www.1800adapter.com/067](http://www.1800adapter.com/067)

PLCC

| Pin Count | Pin Count of Adapter | Lead Pitch mm | Body Width mm | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|----------------------|---------------|---------------|-------------------------|----------------|----------------------|-----------|
| 44 | 48 | 1.27 | 0.654" | CY7C343, EPM5064 | 44-PCC3 | AS-44-48-01P-6YAM | M9452 |
| 52 | 48 | 1.27 | 0.654" | 68HC705B5/B6/B16 | 44-PCC3 | AS-52-48-01P-6YAM | M3823 |
| 52 | 48 | 1.27 | 0.654" | 68HC711E9/E20 | 44-PCC3 | AS-52-48-02P-6YAM | M3824 |
| 52 | 52 | 1.27 | .753"X.754" | WIRED ITO1 | 52-PCC4 | AS-52-52-01P-6TEX | M3275 |
| 68 | 28 | 1.27 | 0.954" | IPLSI 1024/E | 68-PCC1 | AS-68-28-03P-3YAM | M4640 |
| 68 | 28 | 1.27 | 0.954" | IPLSI 1024/E\ | 68-PCC1 | AS-68-28-03P-6YAM | M3280 |
| 68 | 40 | 1.27 | 0.954" | USER CONFIG. WIRE WRAP | 68-PCC1 | AS-68-40-00P-6YAM | M6193 |
| 68 | 40 | 1.27 | 0.954" | PML2552 | 68-PCC1 | AS-68-40-04P-6YAM | M3283 |
| 68 | 40 | 1.27 | 0.954" | 87C196KB/KC/KD | 68-PCC1 | AS-68-40-06P-6YAM | M1698 |
| 68 | 48 | 1.27 | 0.954" | EP1800 | 68-PCC1 | AS-68-48-01P-6YAM | M1965 |
| 68 | 48 | 1.27 | 0.954" | CY7C342, EPM5128 | 68-PCC1 | AS-68-48-02P-6YAM | M3785 |
| 68 | 48 | 1.27 | 0.954" | 68HC(7)11F1/L6 | 68-PCC1 | AS-68-48-03P-6YAM | M3827 |
| 68 | 48 | 1.27 | 0.954" | 68HC(7)11KA2/KA4 | 68-PCC1 | AS-68-48-04P-6YAM | M3828 |
| 84 | 28 | 1.27 | 1.153" | MACH130/131/230/231/435 | 84-PCC5 | AS-84-28-01P-3YAM | M3285 |
| 84 | 28 | 1.27 | 1.153" | MACH130/131/230/231/435 | 84-PCC5 | AS-84-28-01P-6YAM | M1701 |
| 84 | 28 | 1.27 | 1.153" | IPLSI 1032/E,2064 | 84-PCC5 | AS-84-28-02P-6YAM | M3287 |
| 84 | 28 | 1.27 | 1.153" | ISP2064V,2128V | 84-PCC5 | AS-84-28-05P-6YAM | M4268 |
| 84 | 28 | 1.27 | 1.153" | H8/532 | 84-PCC5 | AS-84-28-06P-6YAM | F6675 |
| 84 | 32 | 1.27 | 1.153" | H8/536 | 84-PCC5 | AS-84-32-01P-6YAM | F7015 |
| 84 | 40 | 1.27 | 1.153" | PML2652 | 84-PCC5 | AS-84-40-01P-6YAM | M1426 |
| 84 | 48 | 1.27 | 1.153" | CY7C346, EPM5130 | 84-PCC5 | AS-84-48-01P-6YAM | M3786 |
| 84 | 48 | 1.27 | 1.153" | CY7C341, EPM5192 | 84-PCC5 | AS-84-48-02P-6YAM | M3787 |
| 84 | 48 | 1.27 | 1.153" | 68HC(7)11K4 | 84-PCC5 | AS-84-48-03P-6YAM | M3829 |
| 100 | 52 | 1.27 | .753"X.754" | WIRED ITO1 | 52-PCC4 | AS-52-52-01P-6TEX-MS | M3143 |

PGA

| Pin Count | Pin Count of Adapter | Lead Pitch mm | Body Width mm | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|----------------------|---------------|---------------|-----------------------|----------------|------------------|-----------|
| 44 | 40 | .100" | .850" SQR | PSD301/02/03/11/12/13 | 44-PGA8X8 | AS-044-40-12PG-6 | M1835 |
| 68 | 40 | .100" | .850" SQR | EP-1800 | 68-PGA1 | AS-044-40-12PG-6 | M1271 |
| 132 | 28 | .100" | N/A | ISPLSI 1048C/E, 2096 | 132-PGA8 | AS-132-28-01PG-6 | M1875 |

LGA

| Pin Count | Pin Count of Adapter | Lead Pitch mm | Body Width mm | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|----------------------|---------------|---------------|-------------------------|----------------|-----------------|-----------|
| 48 | 48 | 0.50 | 4X6 | 39XF800A/160A/320A/6401 | 5LG11X6 | AS-48-48-01LG-6 | F7014 |

LCC

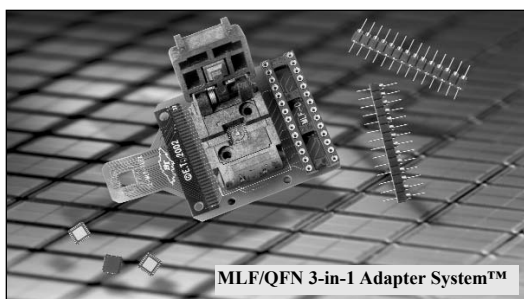
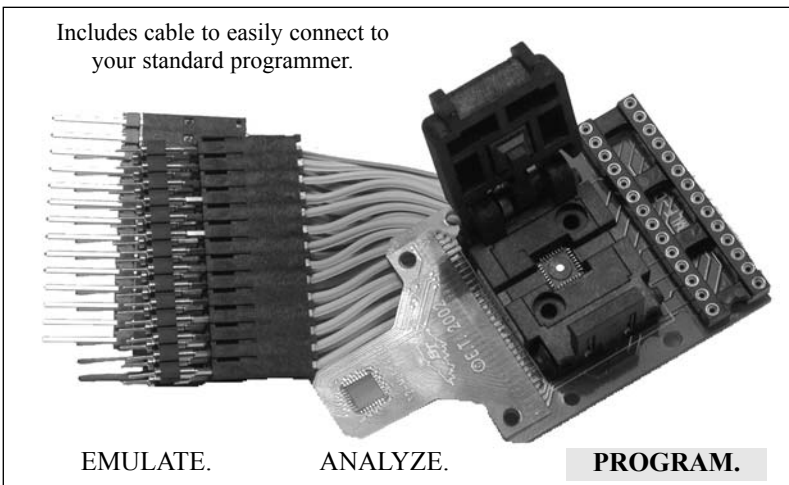
| Pin Count | Pin Count of Adapter | Lead Pitch mm | Body Width mm | Chip Manufacturer | Footprint Code | ET Part# | Drawing # |
|-----------|----------------------|---------------|---------------|-------------------|----------------|----------------------|-----------|
| 20 | 20 | 1.27 | .350" | WIRED ITO1 | 20-LCC1 | AS-20-20-01L-3 | M3086 |
| 20 | 20 | 1.27 | .350" | WIRED ITO1 | 20-LCC1 | AS-20-20-01L-6 | M3087 |
| 28 | 24 | 1.27 | .450" | N/C=4,11,18,25 | 28-LCC6 | AS-28-24-01L-6 | M3123 |
| 28 | 24 | 1.27 | .450" | N/C=1,10,15,21 | 28-LCC6 | AS-28-24-02L-3 | M3126 |
| 28 | 24 | 1.27 | .450" | N/C=1,10,15,21 | 28-LCC6 | AS-28-24-02L-6 | M3127 |
| 28 | 24 | 1.27 | .450" | N/C=1,10,15,21 | 28-LCC6 | AS-28-24-03L-6 | M3132 |
| 28 | 24 | 1.27 | .450" | N/C=1,8,15,22 | 28-LCC6 | AS-28-24-05L-3 | M3141 |
| 28 | 24 | 1.27 | .450" | N/C=1,8,15,22 | 28-LCC6 | AS-28-24-05L-6 | M1605 |
| 28 | 28 | 1.27 | .450" | WIRED ITO1 | 28-LCC6 | AS-28-28-01L-3 | M3178 |
| 28 | 28 | 1.27 | .450" | WIRED ITO1 | 28-LCC6 | AS-28-28-01L-6 | M1931 |
| 32 | 28 | 1.27 | 13.97x11.43 | N/C=1,12,17,26 | 32-LCC7 | AS-32-28-01L-6 | M1161 |
| 32 | 32 | 1.27 | 13.97x11.43 | WIRED ITO1 | 32-LCC7 | AS-32-32-01L-6 | M2244 |
| 44 | 40 | 1.27 | 0.650" | N/C=1,12,23,34 | 44-LCC3 | AS-44-40-07L-6 | M3254 |
| 44 | 40 | 1.27 | 0.650" | N/C=1,13,23,33 | 44-LCC3 | AS-44-40-08L-6 | M3256 |
| 44 | 40 | 1.27 | 0.650" | ATV2500 ONLY | 44-LCC3 | AS-44-40-13L-6YAM-LN | M3265 |
| 52 | 52 | 1.27 | .750" | WIRED ITO1 | 52-LCC4 | AS-52-52-01L-6 | M3274 |



PROGRAMMING ADAPTERS - MLF/QFN

MLF/QFN 3-in-1 Adapter System™

The QFN/MLF 3-in-1 Adapter System™ ensures quick and easy configuring and interfacing to an in-circuit emulator, device programmer, logic analyzer or oscilloscope. The first of its kind, this 3-in-1 system provides the solution for test and design engineers needing QFN (Quad Flat Non-leaded) or MLF (Micro Lead Frame) signal access. This system supports the ATMEL® ATtiny26, ATtiny28, ATmega8, ATmega16 and ATmega32 8-bit AVR® Microcontrollers.



Ordering Information Example

Lead pitch (1=1.5mm, 2 = 1.27mm, 3=1.0mm, 4=.75mm, 5=.50mm, 6=.80mm)

Pin Count of device to be programmed _____ Width of Male DIP Wire Posts
 Product Code AS-08-08-01ML-3 3=.300" 6=.600"

Bottom Pin Count of Adapter _____ Version # of Pin _____ Package to be Programmed:
 ML= MICRO LEAD FRAME, LAP=LAP, TAP=TAP

For a complete list of adapter specifications, pricing and delivery information, please see: Web Link: www.1800adapter.com/060

FEATURES & BENEFITS

- Reduces cost of ownership by 50-66% by eliminating the need for three separate adapters
- Change chip packages rapidly
- Flexible target interconnect minimizes physical strain on target pads
- Excellent for in-circuit or out of circuit programming
- Monitor signals - Logic Analysis
- Quick interface In-Circuit Emulator
- Compact design ensures signal integrity

PROGRAMMING ADAPTERS

Programming Adapter Only

MLF/QFN PROGRAMMING ADAPTER (ONLY) PART NUMBERS

| Pin Count | DIP Pin Count | Lead Pitch (mm) | Body Size | Footprint Code | Chip Manufacturer and Notes | ET Part # | Drawing # |
|-----------|---------------|-----------------|-----------|----------------|---------------------------------|------------------|-----------|
| 8 | 8 | 1.27 | 6X5 | 08-ML08 | WIRED 1 TO 1 | AS-08-08-01ML-3 | M6611 |
| 8 | 8 | 1.27 | 8X5 | 08-LAP1 | WIRED 1 TO 1 | AS-08-08-01LAP-3 | M6488 |
| 8 | 8 | 0.65 | 4.9sq. | 08-MAP1 | WIRED 1 TO 1 (Load Dead Bug) | AS-08-08-01MAP-3 | M6698 |
| 8 | 8 | 0.65 | 6.4sq. | 08-TAP1 | WIRED 1 TO 1 | AS-08-08-01TAP-3 | F7047 |
| 8 | 8 | 1.27 | 5.99X4.93 | 08-LAP2 | WIRED 1 TO 1 | AS-08-08-02LAP-3 | F6696 |
| 8 | 8 | 1.27 | 5.99sq. | 08LAP3 | WIRED 1 TO 1 | AS-08-08-03LAP-3 | F6827 |
| 8 | 8 | 1.27 | 8X6 | 08LAP4 | WIRED 1 TO 1 | AS-08-08-04LAP-3 | F6978 |
| 8 | 20 | 1.27 | 8X6 | 08-ML40 | ATMEL AT45DB161B | AS-08-20-01ML-3 | F6980 |
| 8 | 20 | 1.27 | 8X6 | 08-ML40 | ATMEL AT45DB161B | AS-08-20-01ML-6 | F7018 |
| 20 | 20 | 0.65 | 5X5 | 20-ML02 | WIRED 1 TO 1 | AS-20-20-01ML-6 | F6257 |
| 28 | 28 | 0.50 | 5X5 | 28-ML03 | WIRED 1 TO 1 | AS-28-28-01ML-6 | F6258 |
| 28 | 28 | 0.65 | 6X6 | 28-ML38 | 4Pin Off Rotation (See Drawing) | AS-28-28-02ML-6 | F6712 |
| 32 | 28 | 0.50 | 5X5 | 32-ML04 | ATMEL MEGA 8 | AS-32-28-01ML-3 | M6332 |
| 32 | 28 | 0.50 | 5X5 | 32-ML04 | ATMEL MEGA 8 | AS-32-28-01ML-6 | M6356 |
| 32 | 20 | 0.50 | 5X5 | 32-ML04 | ATMEL TINY 26 | AS-32-20-01ML-3 | F6772 |
| 44 | 40 | 0.50 | 7X7 | 44-ML05 | MEGA16/32, 8535 | AS-44-40-01ML-6 | F6842 |
| 44 | 40 | 0.50 | 7X7 | 44-ML05 | MEGA 162, 8515 | AS-44-40-02ML-6 | F6843 |
| 44 | 40 | 0.50 | 7X7 | 44-ML05 | 8031/51 | AS-44-40-03ML-6 | F6774 |

Complete 3-in-1 Adapter System

MLF/QFN 3-in-1 ADAPTER SYSTEM PART NUMBERS

- Logic Analyzer Adapter
- Program Adapter
- Emulator Adapter

| Pin Count | Pin Map | SMT Lead Pitch (mm) | Body Size | Footprint Code | ET Part # | Drawing # |
|-----------|-----------------|---------------------|-----------|----------------|------------------------------|-----------|
| 32 | ATMEL MEGA 8 | 0.50 | 5X5 | 32-ML04 | BCP-032-ML04Z-MEGA8-3IN1 | F6730 |
| 32 | ATMEL TINY 26 | 0.50 | 5X5 | 32-ML04 | BCP-032-ML04Z-TINY26-3IN1 | F6727 |
| 44 | MEGA16/32, 8535 | 0.50 | 7X7 | 44-ML05 | BCP-044-ML05Z-MEGA16/32-3IN1 | F6728 |
| 44 | MEGA 162, 8515 | 0.50 | 7X7 | 44-ML05 | BCP-044-ML05Z-MEGA162-3IN1 | F6729 |