

Products List

AM1 STARTER KIT

Product Name	Model Number	Product Structure
AM1 STARTER KIT for 49K	MMK01-C49	<ul style="list-style-type: none"> ■ MN101CF49K Starter Kit: 1 ■ CD for the included software (Compiler, debugger, sample program, manual, help): 1 ■ Quick-Start Guide / Registration Guide : 1 ■ USB cable (1.8m): 1 ■ Software License / Warranty cord 1 ■ LCD manual: 1
AM1 STARTER KIT for 77G	MMK01-C77	<ul style="list-style-type: none"> ■ MN101CF77G Starter Kit: 1 ■ CD for the included software (Compiler, debugger, sample program, manual, help): 1 ■ Quick-Start Guide / Registration Guide : 1 ■ USB cable (1.8m): 1 ■ Software License / Warranty cord 1 ■ LCD manual
AM1 STARTER KIT for 78A	MMK01-C78	<ul style="list-style-type: none"> ■ MN101CF78A Starter Kit: 1 ■ CD for the included software (Compiler, debugger, sample program, manual, help): 1 ■ Quick-Start Guide / Registration Guide : 1 ■ USB cable (1.8m): 1 ■ Software License / Warranty cord 1 ■ LCD manual
MN101CF49K CPU board	MMC01-C49	<ul style="list-style-type: none"> ■ AM1 STARTER KIT for 49K CPU board: 1 ■ Warranty card
MN101CF77G CPU board	MMC01-C77	<ul style="list-style-type: none"> ■ AM1 STARTER KIT for 77G CPU board: 1 ■ Warranty card
MN101CF78A CPU board	MMC01-C78	<ul style="list-style-type: none"> ■ AM1 STARTER KIT for 78A CPU board: 1 ■ Warranty card
MN101CF49K CPU board (including socket)	MMC01-C49-S	<ul style="list-style-type: none"> ■ AM1 STARTER KIT for 49K CPU board with CPU socket: 1 ■ Warranty card
MN101CF77G CPU board (including socket)	MMC01-C77-S	<ul style="list-style-type: none"> ■ AM1 STARTER KIT for 77G CPU board with CPU socket: 1 ■ Warranty card
MN101CF78A CPU board (including socket)	MMC01-C78-S	<ul style="list-style-type: none"> ■ AM1 STARTER KIT for 78A CPU board with CPU socket: 1 ■ Warranty card
MN10100 BASE board	MMB01-001	<ul style="list-style-type: none"> ■ AM1 STARTER KIT Display operation board: 1 ■ Warranty card

AM1 Debug Probe for Serial

Product Name	Model Number	Product Structure
AM1 Debug Probe for Serial Type 49K	MDP01-C49	<ul style="list-style-type: none"> ■ AM1 Debug Probe: 1 ■ DebugFactory Builder for AM1 Debug Probe Type 49K ■ USB cable (1.8m): 1 ■ ebug cable (10cm): 1 ■ arranty card ■ Debug monitor-programmed MN101CF49K: 1
AM1 Debug Probe for Serial Type 77G	MDP01-C77	<ul style="list-style-type: none"> ■ AM1 Debug Probe: 1 ■ DebugFactory Builder for AM1 Debug Probe Type 77G ■ USB cable (1.8m): 1 ■ ebug cable (10cm): 1 ■ arranty card ■ Debug monitor-programmed MN101CF49K
AM1 Debug Probe for Serial Type 78A	MDP01-C78	<ul style="list-style-type: none"> ■ AM1 Debug Probe: 1 ■ DebugFactory Builder for AM1 Debug Probe Type 78A ■ USB cable (1.8m): 1 ■ ebug cable (10cm): 1 ■ arranty card ■ Debug monitor-programmed MN101CF49K
DebugFactory Builder for AM1 Debug Probe Type 49K	MDS01-C49	<ul style="list-style-type: none"> ■ DebugFactory Builder for AM1 Debug Probe Type 49K ■ Warranty card ■ monitor-inAM1 for 49K: 1
DebugFactory Builder for AM1 Debug Probe Type 77G	MDS01-C77	<ul style="list-style-type: none"> ■ DebugFactory Builder for AM1 Debug Probe Type 77G ■ Warranty card ■ monitor-inAM1 for 77G: 1
DebugFactory Builder for AM1 Debug Probe Type 78A	MDS01-C78	<ul style="list-style-type: none"> ■ DebugFactory Builder for AM1 Debug Probe Type 78A ■ Warranty card ■ monitor-inAM1 for 78A: 1
monitor-inAM1 for 49K	MDPM49K-QFP100	<ul style="list-style-type: none"> ■ Debug monitor-programmed MN101CF49K
monitor-inAM1 for 77G	MDPM78G-QFP64	<ul style="list-style-type: none"> ■ Debug monitor-programmed MN101CF77G
monitor-inAM1 for 78A*1	MDPM78A-QFP48	<ul style="list-style-type: none"> ■ Debug monitor-programmed MN101CF78A

Notice

*: Specifications and development schedule may be modified without notice.

* In case that specifications are modified, OBJECT offers the additional product information through the attachment and our Web site.

Date:30/July/2004

AM1 STARTER KIT Product Specifications

Hardware Specifications	
Board Structure	2 boards (Baseboard and CPU board) structure. Baseboard and CPU board can be separated.
Board Size	BASE Board: 125mm X 110mm CPU board: 70mm X 50mm
CPU	MN101CF70G/MN101CF77G/MN101CF49K
Memory Mode	Set either Single or Memory expansion by the dip switch on CPU board Processor mode is disabled
CPU Clock	High-speed mode: 19.6608MHz(MN101CF49K/MN101CF77G) 9.8304Hz(MN101CF78A) Low-speed mode: 32KHz
LCD Display Device	M1632 (Seiko Instruments Inc.) compatible, 16 X 2 characters, No backlight
LED Display Device	8 STANLAY ELECTRIC CO., LTD made SMT type LED Color: Green
Toggle Switch	8 Fujisoku Corporation made toggle switch
Push Switch	2 Fujisoku Corporation made push switch
Serial Port	2 9P Male (As one of them is optional, it is not mounted)
Host I/F	USB 1.1
Supported OS	Windows 98SE / 2000 / XP
Power Supply	Operate by USB bus power. Other power supply is unnecessary.
External Expansion	All ports of CPU are connected to three connector areas. Each area has 40P. However, connector is not mounted. 2.54 pitch X 2 lines connector can be mounted.

LED Display Device Connection Specifications			
LED No.	MN101CF78A	MN101CF77G	MN101CF49K
8	-	-	-
7	P16	-	P16
6	P15	-	P15
5	P14	P14	P14
4	P13	P13	P13
3	P12	P12	P12
2	P11	P11	P11
1	P10	P10	P10

Toggle Switch Connection Specifications			
SWITCH No.	MN101CF78A	MN101CF77G	MN101CF49K
8	Un-connecting	P77	P47
7	Un-connecting	P76	P46
6	Un-connecting	P75	P45
5	Un-connecting	P74	P44
4	Un-connecting	P73	P43
3	Un-connecting	P72	P42
2	Un-connecting	P71	P41
1	Un-connecting	P70	P40

Push Switch connection Specifications			
SWITCH NAME	MN101CF78A	MN101CF77G	MN101CF49K
IRQ1	P55	P21	P21
IRQ0	P54	P20	P20

LCD Display Device Connection Specifications			
LCD CONTROL	MN101CF78A	MN101CF77G	MN101CF49K
DATA	PORT7	PORT8	PORT8
RS	P51	P60	P60
E	P52	P54	P52
R/W	P50	P53	P50

Serial Port Connection Specifications			
PIN NAME	MN101CF78A	MN101CF77G	MN101CF49K
CH0:TXD	PA0	P03	P00
CH0:RXD	PA1	P04	P01
CH1:TXD (OPTION)	P15	P00	P30
CH1:RXD (OPTION)	P16	P01	P31

AM1 Debug Probe for Serial Product Specifications

Hardware Specifications	
Supported CPU	MN101CF49K101CF77G/MN101CF78A
Memory Mode	Single-chip mode/Memory expansion mode. Processor mode is disabled.
Operating Clock	Set by DebugFactory Builder
Display Device	2 LED display the status of target power supply and the operating status of AM1 Debug Probe
Support VDD	Support 3.3V to 5.0V
Optional Functions	Program processed at the start can be selected between user and debugger by the dipswitch on the side of Debug probe.
Debug Cable	Both edges 2.54 pitch, 10 pin, 2 line socket and 10cm of flat cable
Host I/F	USB 1.1
Supported OS	Windows 98SE / 2000 / XP
Power Supply	Operation by USB bus power. Other power supply is unnecessary.
Dimension / weight	W96 X H28 X D50 (unit: mm) 100g

Debug Connector Pin Assignment				
PIN No.	Name	MN101CF78A	MN101CF77G	MN101CF49K
1	SBT	P32	P52	P35
2	GND	GND	GND	GND
3	SBI	P31	P51	P33
4	Reserved	N.C	N.C	N.C
5	SBO	P33	P50	P34
6	Reserved	N.C	N.C	N.C
7	BOOTSEL	P37	P24	P15
8	VPP	N.C	VPP(*1)	N.C
9	nRSTOUT	P27	P27	P27
10	TVDD	VDD	VDD	VDD

Target System Specifications

The target system, which is debugged by AM1 Debug Probe, requires the debug connector (2.54pitch, 10 pin, 2 lines) which each signals shown on the separate table is wired. Debug connector of the target system and AM1 Debug Probe should be connected with the attached 10p cable. Also, debug monitor should be programmed in MN101C of the target system. In addition, as each signal connected to AM1 Debug Probe is occupied, the signal cannot be used by the target system.

The product comes with one debug monitor programmed monitor-inAM1 for (49K/77G/78A). monitor-inAM1 can be purchased separately.

* 1 VPP pin should be pulled up to the power supply of 3.3V on the target.

