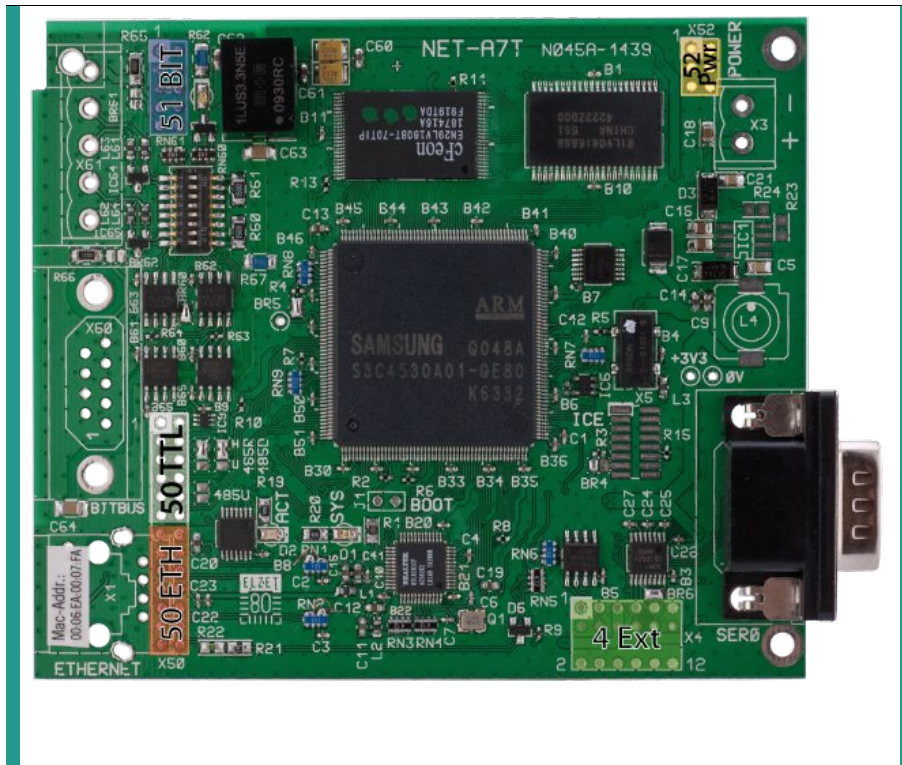


OEM BITBUS Gateway Module ETH-BITM



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ETH-BITM

ETH-BITM is the latest of our Ethernet-BITBUS-Gateways targeted as OEM module to be assembled in manifold ways to suit the user's mounting and cabling constraints.

Features

BITBUS

- 62.5, 375, 750, 1500 kBit speed
- 254 Byte message length
- **isolated RS485** ports for both data and repeater control
- header connectors for all signals to be passed through mother board
- optionally D-sub 9 and terminal connectors, vertical or right angled
- full duplex option for fibre optic drivers or other protocols
- CMOS level BITBUS signals on header connector for custom drivers

Ethernet

- 10/100MBit Ethernet with PHY and transformer
- header connector for mother board connection or RJ45 (hor./vert.)

Power supply

- 24V (5..30V) built in supply
- Can optionally (power supply not assembled) be supplied from external 3.3V

RS232 console port

- 19200 8N1 terminal port D-Sub 9 for service access

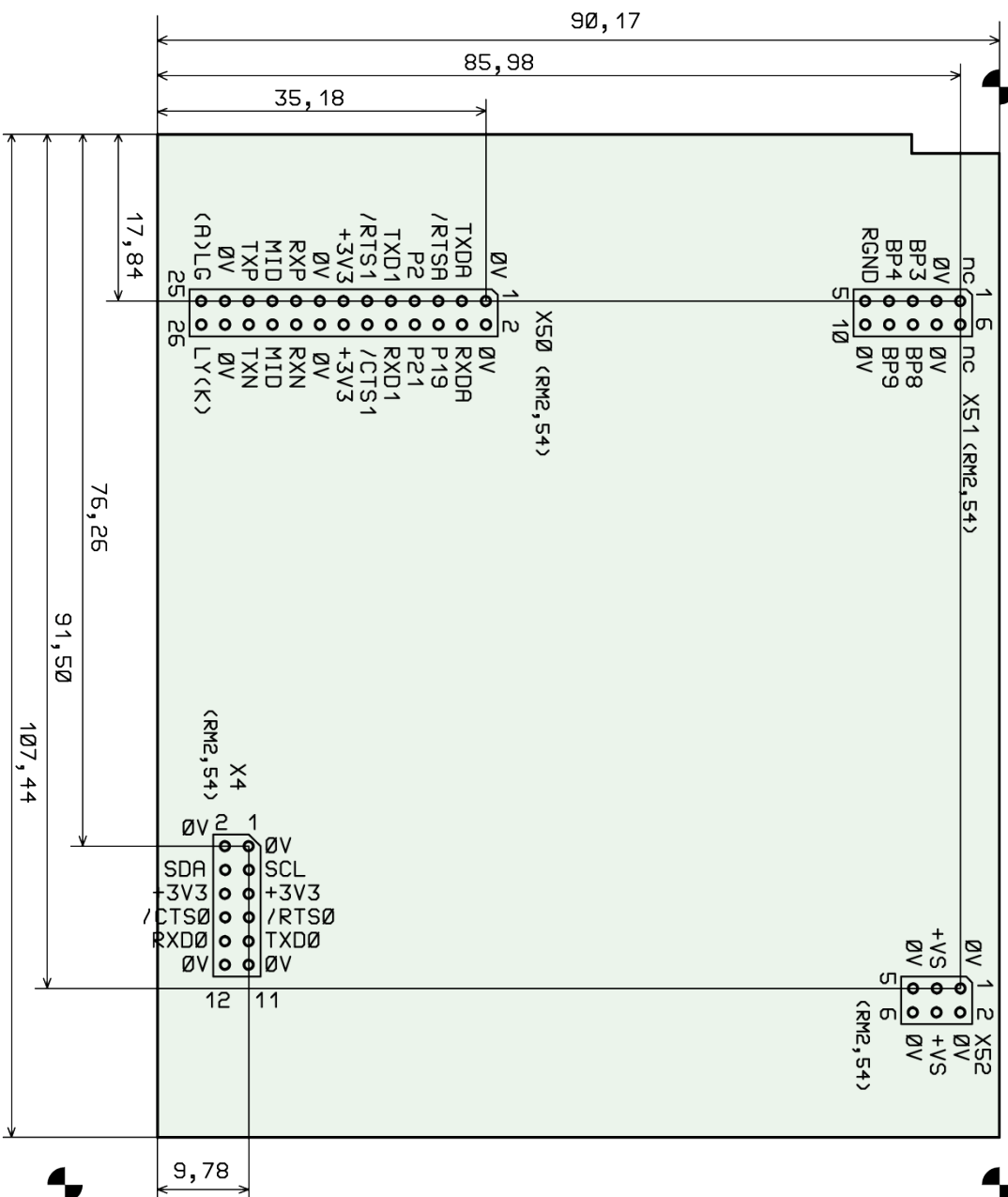
I/O extension

- I2C i/o extension to the left side of the board
- Com0 serial line on same connector

ETH-BITM is the hardware base for our products ETH-BITF, a flat rail mount unit and ETH-BITE, a 100mm size board to fit into 3HE 19 inch racks.

This versatility opens numerous integration options from just mounting the module on your custom board and having all connectors look through your front (or back) panel to a fully integrated assembly where all i/o gets taken out through the module's header connectors to user connectors on the custom board.

As marked on the cover page picture, there are a number of header connectors to be used



with a custom mother board:
 X50 for Ethernet and raw (processor level) BITBUS signals (may be assembled in halves), X51 for the isolated, RS485-driven BITBUS signals, X52 for power and X4 as the extension connector.

Pin assignments

X50 Ethernet and BITBUS CMOS-level signals

PIN X50	Designation	Signal	Comment
1,2,15,16,23,24	GND	GND	Supply ground
3	TXDA	BITBUS TxD	BITBUS data output
4	RXDA	BITBUS RxD	BITBUS data input
5	/RTSA	BITBUS /RTS	BITBUS /RTS output
6	P19	CPU P19	UART Transmit Enable output (software contr.)
7	P2	CPU P2	SYSTEM BLINK output
8	P21	CPU P21	UART Receive Enable CTRL output (software contr.)
9	TXD1	UART1 TxD	UART1 data output
10	RXD1	UART1 RxD	UART1 data input
11	/RTS1	UART1 /RTS	UART1 handshake output
12	/CTS1	UART1 /CTS	UART1 handshake input
13,14	3V3	3,3Volt	Supply voltage input if IC 1 not fitted
17	RXP	RX+	plus of Ethernet receive pair
18	RXN	RX-	minus of Ethernet receive pair
19	MID	MID	Ethernet center tap
20	MID	MID	Ethernet center tap
21	TXP	TX+	plus of Ethernet transmit pair
22	TXN	TX-	minus of Ethernet transmit pair
25	LG(A)	Anode LED green	right LED
26	LY(K)	Cathode LED yellow	left LED

X51 BITBUS RS485 isolated

Attention: Column wise pin numbering to coincide with D-Sub 9 pinout

PIN X51	Designation	Signal	Comment
1,6	nc		not connected
2,7,10	0V	Gnd iso	isolated ground
3	BP3	Data -	BITBUS data minus RS485
4	BP4	RTS-	BITBUS handshake minus RS485
5	RGND	100Ω GND	GND over 100 Ohms, can be shorted with BR61
8	BP8	Data +	BITBUS data plus RS485
9	BP9	RTS +	BITBUS handshake plus RS485

X4 Extension connector

Attention: Mirrored pin numbering for sideways connector

PIN X4	Designation	Signal	Comment
1,2,11,12	GND	Beispiel	Beispiel
3	SCL	SCL I ² C	I2C clock
4	SDA	SDA I ² C	I2C data
5,6	3V3	3,3V supply	Supply input if IC1 not mounted
7	/RTS0	/RTS Com0	Handshake - not used from mCat
8	/CTS0	/CTS Com0	Handshake - not used from mCat
9	TXD0	TxD Com0	Service console transmitter
10	RXD0	RxD Com0	Service console receiver

X52 Supply voltage

PIN X52	Bezeichnung	Signal	Comment
1,2,5,6	GND	Gnd	Supply ground
3,4	+VS	+Supply	5..30V if IC1 is mounted