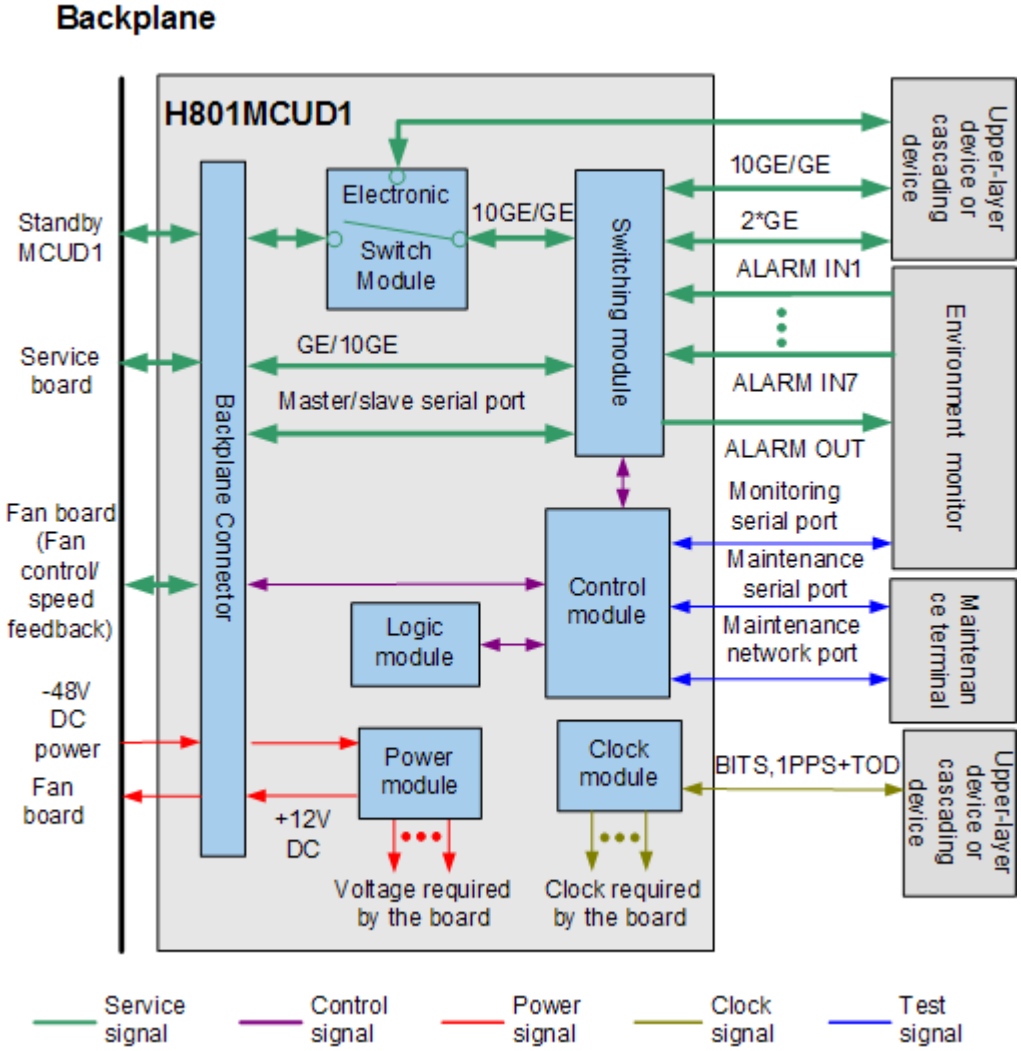
MCUD1 Board Description

The MCUD1 board is a mini control unit board. It is the core of the system control and service switching and aggregation. The MCUD1 board can also function as the management and control core of the integrated network management system (NMS). It communicates with service boards about the key management and control information through the master/slave serial port and inband GE/10GE channel. In this manner, the MCUD1 board configures, manages, and controls the device, and also implements the simple route protocol functions.

Working Principle

Working principle of the H801MCUD1 board

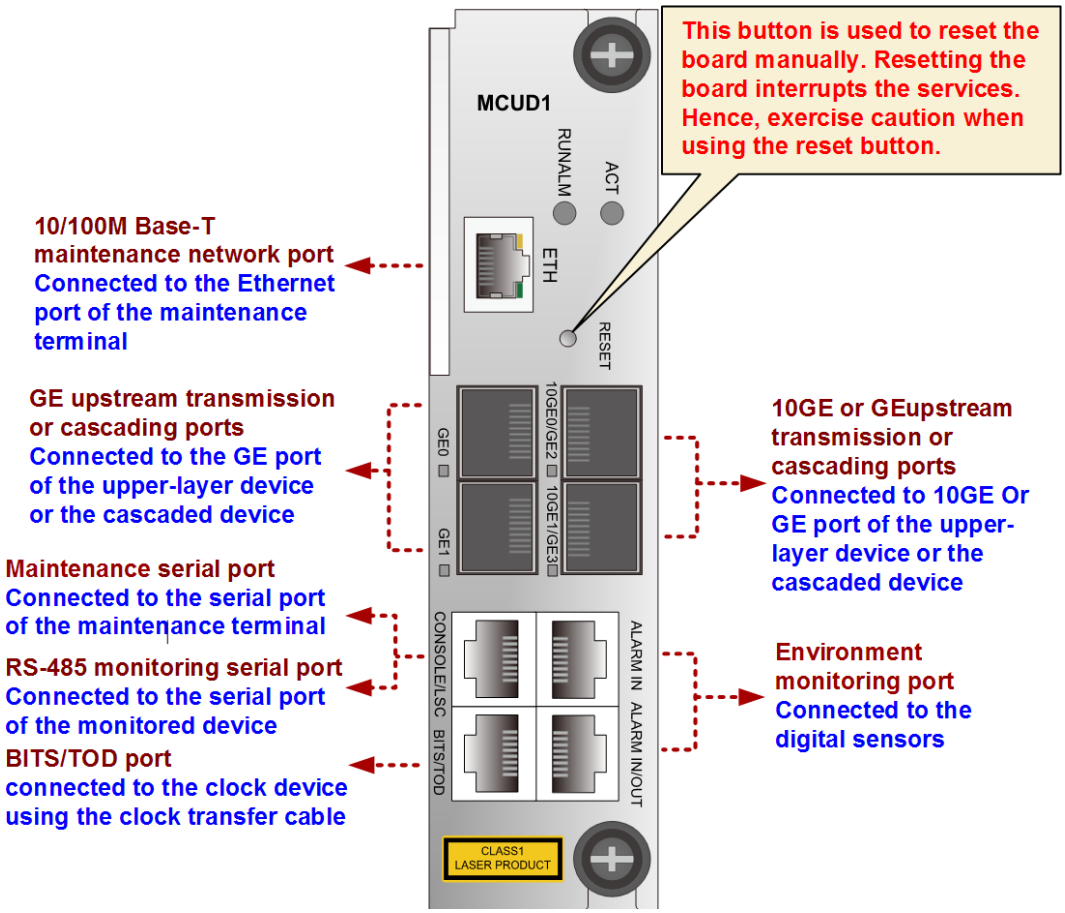


The basic working principles of the H801MCUD1 board are as follows:

- The control module manages the entire board and the service boards.
- The logical module achieves the logical control and stratum-3 clock functions.
- The power module supplies power to other functional modules of the board.
- The clock module provides clock signals for other functional modules of the board.

- The switching module provides the GE port and the 10GE port to switch and aggregate services at Layer 2 or Layer 3.
  - Providing two GE/10GE ports or two GE ports for upstream transmission of the upstream port on the front panel
  - Providing two GE/10GE ports for implementing GE/10GE switching on each service board

Front Panel Port



Indicator

Indicator	Name	Color	Status	Meaning
RUN ALM	Running status indicator	Green	Blinking	The board functions properly
		Red	Blinking	The board is starting up
		Orange	Blinking	A high-temperature alarm is generated
		Red	On	The board is faulty

Indicator	Name	Color	Status	Meaning
		Red/Green	Blinking between red and green	The data recovery completes **NOTE:** It is used for the scenario in which this board replaces the H801MCUD control board and then both of them are installed in the same subrack.
ACT	Active indicator	Green	On	In active/standby mode or load-sharing mode, the board is active
		Green	Blinking	In load-sharing mode, the board is standby
		-	Off	In active/standby mode, the board is standby
GE0, GE1, 10GE0/GE2, 10GE1/GE3	Link and Data status indicator	Green	On	A link is set up on the port
		Green	Blinking	Data is being transmitted on the port
		-	Off	No link is set up on the port, or no data is being transmitted on the port

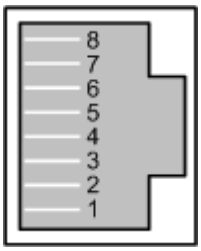
Pin Assignment

Pin assignment of the ALARM IN port

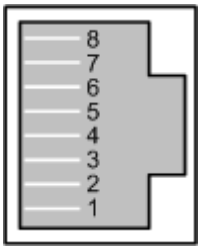
Port	Pin	Signal	Remarks
	1	ALM_RTN	Alarm digital parameter RTN
	2	ALM_IN0	Channel 0 alarm digital parameter signals
	3	ALM_RTN	Alarm digital parameter RTN
	4	ALM_IN1	Channel 1 alarm digital parameter signals
	5	ALM_RTN	Alarm digital parameter RTN
	6	ALM_IN2	Channel 2 alarm digital parameter signals
	7	ALM_RTN	Alarm digital parameter RTN

Port	Pin	Signal	Remarks
	8	ALM_IN3	Channel 3 alarm digital parameter signals

Table 3-15 Pin assignment of the ALARM IN/OUT port

Port	Pin	Signal	Remarks
	1	ALM_RTN	Alarm digital parameter RTN
	2	ALM_IN4	Channel 4 alarm digital parameter signals
	3	ALM_RTN	Alarm digital parameter RTN
	4	ALM_IN5	Channel 5 alarm digital parameter signals
	5	ALM_RTN	Alarm digital parameter RTN
	6	ALM_IN6	Channel 6 alarm digital parameter signals
	7	ALM_RTN	Alarm digital parameter RTN
	8	ALM_OUT	Alarm signal control output

Pin assignment of the BITS/TOD

Port	Pin	Signal	Remarks
	1	BITS_IN_B	Input B of channel BITS clock signals
	2	BITS_IN_A	Input A of channel BITS clock signals
	3	PPS_IN/OUT-	Input or output negative polarity of PPS time signals
	4	BITS_OUT_B	Output B of the BITS clock signals
	5	BITS_OUT_A	Output A of the BITS clock signals
	6	PPS_IN/OUT+	Input or output positive polarity of PPS time signals
	7	TOD_IN/OUT-	Input or output negative polarity of TOD time signals
	8	TOD_IN/OUT+	Input or output positive polarity of TOD time signals

Power: Static: 29 W, Maximum: 33 W