FAQ: How do I add my AMCI module to a PAC Rx7i system?

AMCI **193X, 194X,** and **196X** (where X is the number of channels) modules for the GE Fanuc 90/70 platform can also be installed in a PAC Rx7i system. The following are the steps used to add these modules to this system.

AMCI **193X-05, 194X-05, 293X**, **7951, 7952** and **7961** can also be used in an Rx7I system. Reading data from these modules is the same as for the modules listed above, but extra steps will be required to write data from the Rx7i PLC to the AMCI modules. See Writing to AMCI modules in an Rx7i system on page 4.

1. Set the dip switches on the back of the AMCI 1900 module to match the slot where it will be installed. The module's users manual shows the dip switch settings.
2. Add the AMCI module to the rack configuration as a **VME2Slot** module.
3. Set the VME AM Code to **29h**.
4. Set the VME Base Address to the address appropriate for the slot where the module will be installed. The module's users manual shows the address for the various slot numbers.
5. Set the Region Size to **2**.
6. Set the Interface Type to **Byte Access (8-bit).**
7. Set the VME Block Transfer type to **Enabled**.

The following screen capture shows the rack configuration for an AMCI module installed in slot 11 of an Rx7i system.

The next step is to add a BUS READ BYTE instruction to your logic. It must be a BUS READ BYTE instruction. The BUS READ WORD or BUS READ DWORD instructions will not work.

The BUS READ BYTE instruction uses the following parameters.

Parameter	Description	Additional Information
LEN	Length = number of bytes to be transferred	1931 & 1941 = 4 1932 & 1942 = 8 1933 & 1943 = 12 1934 & 1944 = 16 1961 = 6 1962 = 12 1931-05 & 1941-05 = 6 1932-05 & 1942-05 = 10 1933-05 & 1943-05 = 14 1934-05 & 1944-05 = 18 2931 = 6 2941 = 6 2932 = 10 7951 = 10 7952 = 20 7961 = 16
R	Rack Number	Rack where the AMCI module is located
S	Slot Number	Slot where the AMCI module is located (must match dip switches)
SS	Subslot Number	Optional, Defaults to zero
RGN	Region	Optional, Defaults to one
OFF	Offset	The Offset in Bytes
ST	Status	Optional, the status of the reading operation
Q	Reference	Register location where read data will be placed.

The following image shows the BUS READ BYTE instruction reading data from a 1934 or a 1944 module located in slot 11 of rack zero. Your length and other address parameters may be different.

The reading operation will occur when the instruction receives power on this input.
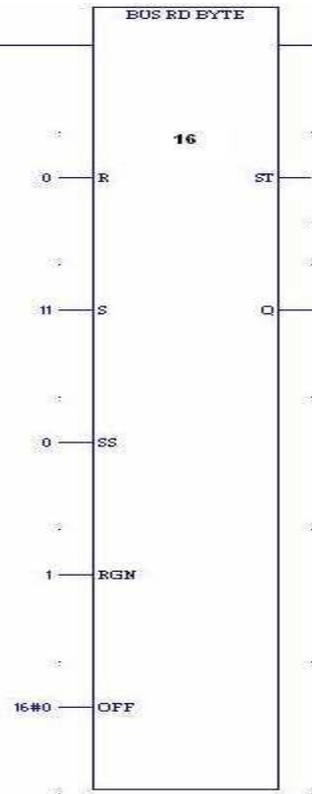
This output will pass power to the when the read operation is successful.

A value of zero will be placed in the Status Register to indicate that data has been successfully transferred.

Location of data read from the AMCI module

```
                    BUS RD BYTE

                        16

         0 ——— R              ST ———


        11 ——— S               Q ———————



         0 ——— SS



         1 ——— RGN



      16#0 ——— OFF
```

Status Output

Value	Meaning
0	Operation successful
1	Bus Error
2	Module does not exist at rack/slot location
3	Module at rack / slot location is an invalid type
4	Start Address is outside the configured range
5	End Address is outside the configured address range
6	Absolute address even but interface configured as odd byte only
8	Region not enabled
10	Function parameter invalid

Writing to AMCI modules in an Rx7i system

AMCI **193X-05, 194X-05, 293X**, **7951, 7952** and **7961** can also be used in an Rx7i system. Reading data from these modules is exactly the same as in the description listed above. However, because the Rx7I system operates at a much faster rate than the AMCI modules, it will be necessary to write only one byte of data at a time when sending setup data from the PLC to the AMCI module.

This can be accomplished in one of two ways.

You can create separate BUS_WRT_BYTE instructions for each byte of data that you want to send to the AMCI module, or you can use the same BUS_WRT_BYTE instruction multiple times, changing the source and destination information each time the rung with the write instruction becomes true.

Whichever method you use, it is important that word 1 be the last word written to the AMCI module. The upper byte of this word contains the Transmit Bit and the AMCI module only acts on the data written to it on the 0 to 1 transition of this bit. Ignoring this step will cause the AMCI module to act on the last programmed data and not on the data that you are currently sending to the module.

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