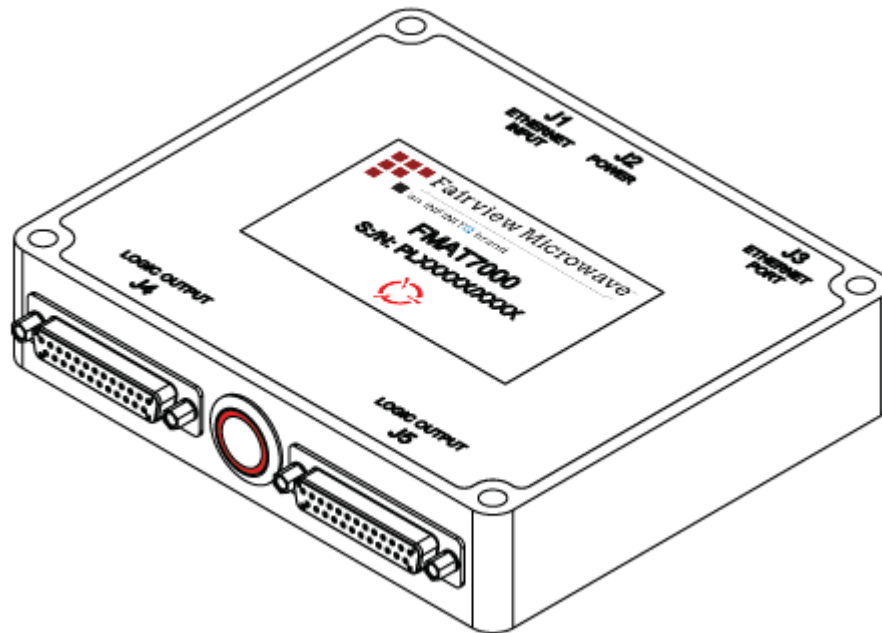


# **Dual Ethernet Microcontroller, TTL Programmable Interface, RJ-45 Ethernet Interface, 18 BITS (x2), +6V, D-Sub Connectors**

## **FMAT7000**

### Operating Instructions



## 1) **FMAT7000**

Fairview Microwave's model number FMAT7000 is a microcontroller box which inputs an Ethernet command that allows 2 X 18 parallel TTL bits to be toggled high and low.

## 2) **Ethernet Connection**

The microcontroller box has the following Ethernet connection through the RJ45 Port on the box:

IP Address: 192.168.100.XXX and 192.168.100.XXX  
Subnet Mask: 255.255.255.0  
Default Gateway: 10.10.6.1  
Connection Port: 3000

**Note:** If directly connecting a computer to the box, a crossover cable must be used. If the computer and box are both connected to the same network, a standard Ethernet cable can be used.

### 3) Ethernet Command Structure

The Ethernet command structure is set up to input 18 text characters containing either a 1 or 0 for each of the 18 parallel TTL outputs in the order of MSB to LSB.

**Example:** The table below shows the command to send just the LSB high, just the MSB high, or all bits high. Any bit or combination of bits can be toggled by placing a text character 1 in its place in the 18 character string.

Output	MSB																LSB
LSB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
MSB	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All High	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

LSB high all other bits low “000000000000000001”

MSB high all other bits low “100000000000000000”

All bits high “111111111111111111”

### 4) TTL Outputs

The 2 X 18 TTL Outputs are fitted with a series 1 k resistor to protect the microcontroller from short circuit conditions on the outputs. They will toggle from 0 V with a “0” input to +5 V with a “1” input.

## 5) J2 - Pin Assignment

Pin No.	Function	Description
<b>1</b>	TTL1	MSB
<b>2</b>	TTL2	
<b>3</b>	TTL3	
<b>4</b>	TTL4	
<b>5</b>	TTL5	
<b>6</b>	TTL6	
<b>7</b>	TTL7	
<b>8</b>	TTL8	
<b>9</b>	TTL9	
<b>10</b>	TTL10	
<b>11</b>	TTL11	
<b>12</b>	TTL12	
<b>13</b>	TTL13	
<b>14</b>	TTL14	
<b>15</b>	TTL15	
<b>16</b>	TTL16	
<b>17</b>	TTL17	
<b>18</b>	TTL18	LSB
<b>19</b>	GND	GND
<b>20</b>	NC	No Connection
<b>21</b>	NC	No Connection
<b>22</b>	NC	No Connection
<b>23</b>	NC	No Connection
<b>24</b>	NC	No Connection
<b>25</b>	NC	No Connection