

## Overview

Access legend: R = Read, RW = ReadWrite. Type legend: Int, Str, Bool, Enum.  
Tree below mirrors firmware Ember+ hierarchy and parameter IDs.

## Ember+ Tree

- o Root
  - + - o Device
    - | +- \* Device Name [ReadWrite, String]
    - | +- \* Active Mode (number of active segments) [ReadWrite, Enumeration]
    - | +- o Segments
      - | | +- o Segment 1 .. Segment N
        - | | | +- \* Red [ReadWrite, Integer]
        - | | | +- \* Green [ReadWrite, Integer]
        - | | | +- \* Blue [ReadWrite, Integer]
        - | | | +- \* Segment LED Count [ReadWrite, Integer]
        - | | | +- \* Segment Name [ReadWrite, String]
  - + - o Network Config
    - | +- o IP Config
      - | | +- \* IP Address [Read, String]
      - | | +- \* Subnet Mask [Read, String]
      - | | +- \* Gateway [Read, String]
      - | | +- \* MAC Address [Read, String]
      - | | +- \* DHCP Enabled [Read, Boolean]
    - + o Socket Config
      - | | +- \* HTTP Port [ReadWrite, Integer]
      - | | +- \* Ember Port [ReadWrite, Integer]
      - | | +- \* TSL Port [ReadWrite, Integer]
      - | | +- \* Pro-Bel Port [ReadWrite, Integer]
      - | | +- \* OSC Port [ReadWrite, Integer]
      - | | +- \* Syslog Port [Read, Integer]
      - | | +- \* NTP Port [Read, Integer]
  - + - o System Status
    - | +- \* CPU Usage (Core 0) [Read, Integer]
    - | +- \* CPU Usage (Core 1) [Read, Integer]
    - | +- \* RAM Usage [Read, Integer]
    - | +- \* Flash Usage [Read, Integer]
    - | +- \* Core Temperature [Read, String]
    - | +- \* Internal Voltage [Read, String]
    - | +- \* Core Clock [Read, Integer]
    - | +- \* Free Heap [Read, Integer]
    - | +- \* Flash Cycles [Read, Integer]
    - | +- \* Device Serial [Read, String]
    - | +- \* Device UUID [Read, String]
    - | +- \* Uptime [Read, String]
    - | +- \* Reset Reason [Read, String]
    - | +- \* Ethernet Link Status [Read, Boolean]
    - | +- \* Ethernet Link Speed [Read, String]
    - | +- \* LED State HEX [Read, String]
    - | +- \* LED State RGB [Read, String]
    - | +- \* Reboot Device [ReadWrite, Boolean]
    - | +- \* Swap Segments (2-mode behavior) [ReadWrite, Boolean]
  - + o Ember Clients
    - | | +- \* Connected Clients Count [Read, Integer]
  - + o HTTP Clients
    - | | +- \* Connected Clients Count [Read, Integer]
  - + o TSL Clients

- | | | +- \* Connected Clients Count [Read, Integer]
- | | +- o SW-08 Pro-Bel Clients
- | | | +- \* Connected Clients Count [Read, Integer]
- | | +- o OSC Clients
- | | | +- \* Connected Clients Count [Read, Integer]
- | +- o Presets
- | | +- o Preset 1 .. Preset 10
- | | | +- \* Preset Color: Red, Green, Blue [ReadWrite, Integer]
- | | | +- \* Preset Name [ReadWrite, String]
- | | | +- \* Start Effect / Direction / Duration [ReadWrite, Enum/Enum/Integer]
- | | | +- \* Stop Effect / Direction / Duration [ReadWrite, Enum/Enum/Integer]
- | | | +- \* Constant Effect Mode / Direction / Period [ReadWrite, Enum/Enum/Integer]
- | | | +- \* Fade Out Time [ReadWrite, Integer]
- | | | +- \* Morse Text [ReadWrite, String]
- | | +- o Audio Monitor (per preset)
- | | | +- \* Left Channel [ReadWrite, Enumeration]
- | | | +- \* Right Channel [ReadWrite, Enumeration]
- | | | +- \* Low-Mid Threshold [ReadWrite, Integer]
- | | | +- \* Mid-High Threshold [ReadWrite, Integer]
- | | | +- \* Low Color: Red, Green, Blue [ReadWrite, Integer]
- | | | +- \* Mid Color: Red, Green, Blue [ReadWrite, Integer]
- | | | +- \* High Color: Red, Green, Blue [ReadWrite, Integer]
- | +- o Rules
- | | +- o Rules for Segment 1 .. Segment N
- | | | +- o Rule 1 .. Rule 5
- | | | | +- \* Rule Active [ReadWrite, Boolean]
- | | | | +- \* Target Preset [ReadWrite, Enumeration]
- | | | | +- \* TSL Index [ReadWrite, Integer]
- | | | | +- \* TSL Bit [ReadWrite, Integer]
- | | | | +- \* OSC Path [ReadWrite, String]
- | | | | +- \* OSC Match Mode [ReadWrite, Enumeration]
- | | | | +- \* OSC Value A [ReadWrite, Integer]
- | | | | +- \* OSC Value B [ReadWrite, Integer]
- | | | +- \* OSC String [ReadWrite, String]