Name: Architecture Overview Package: Measurement_System_Embedded_Software Version: 1.1 Author: Thomas Batt «Software_Layer» System_Management + Measurement_Application_main + SystemManager

«Software Layer» «Software Library» Measurement_Application Library + ApplicationManager + State_Machine «Software_Subsystem» «Software_Subsystem» + Measurement_Controller «Software_Library» + Measurement Measurement Measurement_Controller State Machine + Measurement + MeasurementController + State
+ StateN + VoltageMeasurement + MeasurementController Events + StateMachine + CurrentMeasurement + StateMachineGlobals + ResistanceMeasurement «Software_Layer» Hardware_Device_Abstraction + DeviceAbstractionManager + AnalogMeasure
+ UserIndication
+ UserInput + AnalogMeasurement «Software_Subsystem» «Software_Subsystem» «Software_Subsystem» UserIndication Analog MeasurementUserInput + AnalogMeasurement + UserInput + UserIndication -O + I_AnalogMeasurement ⊶O + I_UserInput → + I_UserIndication •• + I_AnalogMeasurement_Config **○**O + I_UserInput_Config ←O + I_UserIndication_Config ••O + ICB_AnalogMeasurement «Software_Layer» Hardware_Device_Driver + DriverManager + Board_Driver «Software_Subsystem» «Software_Subsystem» «Software_Subsystem» Microcontroller_Configuration Microcontroller_Driver Board_Driver + Microcontroller_Driver + Microcontroller_Configuration + STM32F7xx + I_NVIC_Dispatcher_Types + I_Button_Types ••O + I_NVIC_Dispatcher_Config ⊶O + I_Button o-O + ICB_ServiceInterrupt → + I_Button_Config + STM32F7xx 0-0 + I_LED «Software_Subsystem» ⊶O + I_LED_Config STM32F7xx + STM32F7xx_NUCLEO_144 + stm32f7xx_hal_conf «Software_Subsystem» «Software_Subsystem» + stm32f7xx_hal_msp STM32F7xx_NUCLEO_144 STM32F7xx + stm32f7xx_it + stm32f7xx_setup + Button + HAL_Driver + system_stm
+ MDK-ARM + system_stm32f7xx + LED + NVIC_Dispatcher